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ORIGINAL LECTURES.

ANNUAL ADDRESS BEFORE THE AMERICAN PUBLIC HEALTH ASSOCIATION.

Delivered Tuesday Evening, December 8, 1885, In the City of Washington, D. C.,

BY THE PRESIDENT, JAMES E. REEVES, M.D.,

OF WHEELING, WEST VIRGINIA.

GENTLEMEN AND FELLOWS:

By your kindly suffrages I have been clothed temporarily with the highest honor that can be conferred by sanitary workers in the United States; and I confess that I have reached the duties and exercises of this our thirteenth annual meeting, and the culmination of my official privilege and distinction, with many misgivings as to my ability to meet the full measure of your reasonable expectations.

A man, it is true, may possess thoughts, sentiments, opinions, attachments; he may be animated by an ardent desire to recommend these to the belief, or to the approbation of others; but in order to recommend sentiments and opinions with success, it is indispensable that he shall be able to command those easy and natural graces, those soft insinuating arts of tone, of gesture, of expression, which must either be the gratuitous endowment of nature or the result of a long course of assiduous application and practice.

A speaker is laboring under many disadvantages who has to encounter, on the one hand, all the negative influences which result from the want of a free and frequent intercourse with the world; from the want of a familiar acquaintance with the current terms and popular phrases—those silken approaches and passages to the heart by which the convictions of man are created or confirmed; while, on the other hand, he must encounter all the positive influences which result from a retired and silent life.

Besides all this, you will admit that our profoundest feelings are always the most difficult to communicate, yet, at this hour, and in the presence of this large assembly of wise and good men who have come up from the North, the South, the East and the West—representing not only hundreds of cities and large towns in this great country of ours, but also the Canadas—bringing with them, to grace this auspicious meeting at the Capital of the Nation, priceless knowledge how to increase the duration and value of human life and elevate humanity to the highest standard of physical, mental and moral grandeur—I invite your attention to subjects which have encouraged the most industrious energies of my life: namely, the Public Health, and, to that end, the usefulness and welfare of the American Public Health Association whose good name and honor have been committed to our care; and I trust it will not be in vain if I bespeak your kind indulgence while I refer to matters which I have had so much at heart for the last fifteen years.

The success of our meetings has always largely depended upon the well-directed energies of the local committees of arrangements, and I am sure every member of the Association present will join me in heartily extending to Dr. Smith Townshend, chairman, and his distinguished associates on the local committee, many, many thanks for the excellent and attractive programme they have so liberally provided for our reception and entertainment during the hours of recess. It promises, verily assures, "a feast of reason and flow of soul;" and again it will be said, and justly, that the medical profession and the city authorities of Washington never do things halfway.

But our greetings and congratulations are not unmixed with sorrow, for they link us closely with "the valley of the shadow of death!" A great statesman, Thomas A. Hendricks, the Vice-President of the United States—a great and good man in every phase of his life—has been suddenly and unexpectedly cut down from among the living; and the knell of the sorrowful tidings, on the evening before Thanksgiving, cast a shadow over the hearthstones of millions of his countrymen. And this is not all of the sadness which on this occasion possesses our hearts. Since the last meeting, six master workmen in the vineyard of sanitary science, of beautiful private character and solid professional attainments, have been called off from labor to refreshment; and I am filled with grief almost too full for utterance when I think of the loss this Association has sustained by the death of J. G. Thomas, of Savannah; F. W. Hatch, of Sacramento; Thomas L. Neal, of Dayton; John J. Speed, of Louisville; Richard McSherry, of Baltimore; and Thad. M. Stevens, of Indianapolis. These dear names will never be forgotten, for they are indissolubly connected with the history of sanitary progress in the United States. Having made their best offerings at the shrine of the Public Health, they then "took their burden for a pillow, and laid down by the wayside to sleep that dreamless sleep" that wakes in a glorious immortality! Peace, peace to their precious ashes! The terrible question that irresistably pre-

sents itself—who of us shall be called next? cannot be answered. Let us, therefore, be admonished by the uncertainty of life, and "work while it is called to-day, for the night cometh when no man can work."

Every such an assembly as this moves forward another day's journey the ark of the sanitary covenant, and humanity is bettered and made happier thereby. A body so numerous as the one here assembled, which extends its action and influence over every part of the national domain, and is intimately connected with all the interests of society, cannot meet to deliberate on its usefulness, its interests, and its dignity, without making its impress upon the great heart of society. The ruling character of the nineteenth century is the tendency to perfecting the physical, intellectual and moral welfare of man. In every civilized and progressive country, sciences, arts, private and general industry, everything, in fact, tends towards this end; every one is carried forward by this general movement of advance, men as well as governments. And what are the obligations of organized government to its citizens concerning the security of the public health? It would be easy to present examples from the history of republics which have arisen and passed away in distant lands and in different ages, in proof of the *epidemic agency of bad government*, and as a warning to the rulers of our own dear land where a new social experiment is in progress, the fairest, the freest, the most hopeful of any upon which the sun has diffused his life-giving radiance. And what are the elements of this beauty, this freedom, this bright anticipation? The answer is, our own hallowed institutions; and another and far more important question should immediately follow—how shall they be preserved?

Hygeia has been called the hand-maid of liberty; and in illustration of this position historic examples could be furnished pointing out the diminished population, decay of agriculture and commerce, and increase and fatality of disease which ensued on the downfall of republics. Knowledge of changes of this nature which followed the destruction of the republics of Etruria and Magna Græcia by Rome, and then noting those manifested when the latter abandoned the republican for the imperial and despotic government, should be embraced in the history studies of every common-school boy and girl in the United States. In subsequent times, what a contrast between the face of the country, as described by Muratori, when it had been overrun by the barbarians of the North, with that in a later age, when Christian civilization and liberty gave impetus to agriculture and commerce, by imparting comparative security to the people who embarked in such industry and advancement. The region now called Turkey in Europe, Greece and Asia Minor, exhibits silent but indubitable testimony in support of the same argument.

In these days of political struggle and divers interests, in this country, we hear much of the various means for the advancement and protection of the agricultural, the manufacturing, the mercantile, and many others of less extent and importance, including so-called *vested rights*. Each of these interests is made the theme for animated discussion and sharp contest by opposing parties at the hustings, and thence become irrepressible questions for deliberation and decision by legislative assemblies, both state and national; and correctly so, for where the interests of the people are largely involved it is manifestly the duty of government to foster and protect them; and where they are opposed to each other, so to regulate them on principles of justice as shall conduce to the general welfare and happiness.

But what question of a mere business interest can compare, either in importance or extent, with the general and individual interest which every man has in the preservation of health and life? No matter what the labor, manual or intellectual, at which he is engaged, nor how productive, each and every mode of obtaining individual supplies and contributing to the social welfare of the community is, and must ever be, subordinate both individually and generally to the possession of health, the cash value of which is well recognized.

Accepting the estimate made by statisticians of the financial value of the life of each able-bodied, industrious man at *sixteen hundred dollars*, and the average cash value of each man, woman, and adolescent above twelve years of age, at *one thousand dollars*, we then have some conception of the financial value of the life of each citizen, and the loss to the wealth of the community in unproductive labor from sickness, and by death, from preventable diseases. It needs, therefore, no labored argument to prove that it should be the first duty of government, alike state and national, to protect the public health by legal statutes based upon the knowledge which sanitarians have gained by their self-sacrificing and humane industries, and sown broadcast, without price, among the people, and to see that all the members of society are benefited by it. Indeed, every measure which relates to the improvement of the sanitary condition of the people generally, deserves the earnest attention of statesmen and the favor and hearty support of the national government. Truly, sanitary science investigates the wants of humanity, and holds within its broad scope society in general. Human vicissitudes meet it at all times and places, and everywhere they find it prepared to give succor equal to the existing emergency.

Statistical researches have discovered two extremely important facts,—namely: that the mean duration of human life is generally less than the three-score years and ten commonly allotted as the term of man's existence, but that, on the other hand, communities have it in their power to diminish the causes which produce sickness and premature death; and it has been made evident that in consequence of the wise employment of that power, during the last century, the average duration of human life is slowly but progressively on the increase.

A comparison of the liberal and wise provision made by some of the European powers for the promotion of sanitary science, and for enforcing its life-saving and wealth-producing precepts among all classes of the people, with the spasmodic, unreliable and inefficient legislation on the same subject in this

rich and great country of ours, is, to say the least, not flattering to our national pride. Yet, withal, it must be acknowledged that the national legislature is very liberal in many matters. In the exercise of its supreme authority over land and sea, it is not only utilitarian, but really scientific and very sympathetic. Unfortunately, however, protection of the citizen from preventable diseases which destroy many thousands of lives annually, the cash value of which amounts to millions of dollars, seems to be no part of the national care or responsibility.

From the Agricultural Department, the Commissioner may send our distinguished Fellow, Dr. Salmon, into any part of the United States to investigate an outbreak of disease among cattle, horses, sheep and swine, chickens, geese and ducks—if there should be no demurrer of *States Rights*!—and he may order an inquiry to be made concerning the blight of the crops—the *potato-rot*, for example,—and the best method of housing, making healthy and productive swarms of honey-bees; but what special, well-organized national department have we which is charged with the humane duty of investigating the causes of diseases among men, women and children?

The national government has been thoughtful and liberal in establishing a Department of Education, and the Commissioner, General Eaton, has so wisely and admirably directed the interests committed to his care that, hand in hand with State Superintendents of the public school system, under his leadership the whole nation has been thoroughly awakened to the importance of the mental culture of the citizen; but, unfortunately, at the same time, greatly to the neglect of his physical culture, without attention to which there can be neither longevity and improvement of race, nor stability of government. In other words, the *intellectual life*, not the *absolute life*, is the subject of national concern.

There have also been provided a Department of Justice, a Civil Service, and a Secret Service, also many other agencies for the enforcement of law and order in society. Even the fisheries, the fish-hatcheries, and the young seals of Alaska must needs have their agents, and are thus vouchsafed national protection; but the defenceless innocents, intended by nature to be the citizens of the next generation, may be killed by hundreds of thousands annually, from preventable diseases—scarlet-fever, diphtheria, measles, etc.—and the slaughter is wickedly charged to the will of Divine Providence!

The passage from infancy to childhood, and from childhood to adolescence, is a thousand times more dangerous than the approach to our harbors; but no central effort is made to save the children from death before they reach their fifth anniversary in the voyage of life. During the present year an appropriation of over two millions of dollars ($2,368,102) was made for the establishment and maintenance of light-houses, fog-signals, and other like means to warn and guide the mariner; and should shipwreck nevertheless overtake him, nearly another million ($926,900) has been furnished to aid in his escape from imminent peril by keeping up the service of the Life-Saving Stations.

In the same spirit, the Signal Corps was supplied with $862,580 for its support. It is a valuable service, and well repays to the country the money expended upon it. So long, however, as the object of this weather bureau embodied merely an effort to protect the citizen from disease, no money was voted to prosecute the needful inquiries; but as soon as it was suggested that warnings might be given of approaching storms, and *property*, both on land and sea, be thereby protected, money was appropriated by millions to aid and, as far as possible, perfect that service.

To the same object may be ascribed the munificence of the government in giving millions of money to the Coast and Geodetic Surveys, and for the work of the engineers in enlarging the channels to our harbors and improving our interior water-ways. And thus it seems it is less the life than the property of the citizen that is the object of care; for we have seen where property is concerned the national legislature is always appreciative and liberal. It is only when we come to ask for help to combat the preventable diseases constantly present among the people, and save thousands of valuable lives, that the minds of the national guardians become unappreciative and inattentive.

The liberality in aid of Arctic relief expeditions, and for observations on the transit of Venus, is in striking contrast with the legislation on the subject of the public health. In the budget of appropriations for the present year, $146,500 are given to the National Museum; $24,500 for the Howard University; $49,900 for the Freedman's Hospital and Asylum; $242,138 for the Hospital for the Insane; $72,000 for the Columbia Institute for the Deaf and Dumb; and as final aid to the World's Industrial and Cotton Exposition, $335,000; but how much for the protection of the health and lives of the people? It is true, temporary provision has been made to protect the country at large against the exotics, cholera and yellow fever; but it is the enemies we have always with us—scarlet-fever, typhoid fever, diphtheria, and other well-known diseases—that produce the greatest destruction of human life and swell the total of the general distress in all parts of the country, and to combat which no national provision has been made.

Besides all this surveillance of various interests, and the supply of millions of money to support them, how many square miles of the national domain have been given away in railroad subsidies under the plea, no doubt, that "the end justifies the means?" Yet these acts of a liberal and progressive government constitute, probably, not the one-hundredth part of the sum total of appropriations of money for purposes of far less importance than the interests of the public health.

It may be said that protection from the common diseases of the country is a matter that belongs to the State, the municipality; but it belongs to the national government as well, at least, with equal reason for the establishment and maintenance of a central Bureau of Education, and a Department of Justice, that much more can be effected by national work and coöperation than by a series of independent and incoördinated local efforts.

But I pray you not to believe that I think the De-

partments of Agriculture, Education, and Justice have received undue support and encouragement. Very far from such an opinion, so far, indeed, that I should be glad to see increased facilities given to the Agricultural Department for the study of the diseases of our domesticated and food-producing animals; also, greater latitude of authority and more money given to the Department of Education. My object in directing your attention to them is simply to show that the interests of the public health have not received a corresponding and sufficient share of national aid and encouragement.

The National Board of Health, which a few years ago was a live power and a strong arm in protecting the public health, has been so completely handicapped and crippled by inadequate appropriations of money for its support, that it has lately been incapable of performing the important service for which it was created, and, for that reason, has now but a nominal existence.

The Marine Hospital Service has been greatly favored; and having been thus encouraged, its authority has been industriously directed by the Supervising Surgeon, Dr. Hamilton. Indeed, he has done his work so well that there is danger, I think, of overloading him with extra-official duties and responsibilities, such as the control of Coast Quarantine and Sanitary Inspections, with their complex entanglements, national and inter-state—duties which were not embraced, or so delegated, "in the bond" establishing that service. But however active and efficient this valuable service may have become under the administration of its able director, Dr. Hamilton, it is not proportioned to meet the need of a permanent and well supported National Health Bureau, which humanity, the spirit of the age, and the progress of sanitary science in this country demand shall be established, either as an independent branch of the public service, or in connection with the Departments of Agriculture and Education. Without such national recognition and liberal support, it is impossible to bring sanitation in this country up to the level of its rapid advancement in Europe; and surely this great government of ours ought not be behind the sister governments in such good work.

We are, to-day, at the very threshold of great possibilities in preventive medicine, and the central government should foster every effort for the success of the work in which sanitarians are so heartily engaged. To aid them in the study of contagious or infectious diseases, both among human beings and animals, and the blights upon our crops, a National Biological Laboratory should be provided; and no other place would be so well suited for the location of such a school of science as the new building now in process of erection for the Army Medical Museum and Library. With a thoroughly equipped National School of Biology, our scientists would then not have to visit the laboratories abroad—to Pasteur, in Paris; Klein, in London; and Koch, in Berlin;—neither should we see our own distinguished Sternberg quartered at the Johns Hopkins University, in Baltimore, for favorable facilities for the study of micro-organisms in relation to diseases.

Biology owes its existence to microscopy, and under its searching penetration the whole field of the practice of medicine has been revolutionized and placed upon more rational foundation. Without the aid of microscopical investigations, sanitary science could have made less substantial progress, and mere conjecture would still be the answer to many of its important problems. Hence, to be a sanitarian in the full sense of the name, means familiarity with microscopical technology, and the ways by which the great advances of to-day in science have been reached. Verily, what a speedy march to triumph in the inviting field of Preventive Medicine, if every board of health, every health officer, every practicing physician, were familiar with and employed the microscope in the study of the natural history of diseases? What is wanted is a unification of scientific sanitary work. A civilization based on science is ever progressive; and if our hopes for a glorious future are based on scientific research, they are truly well founded.

I hope you will take advantage of the opportunity afforded by this meeting, to urge upon Congress, now in session, the necessity of legislation in the interests of the public health and scientific sanitary work. Your presence in such large numbers—having come up hither from your far-off homes; quit for the time, your business of bread-winning; and emptied your pockets of many hard-earned dollars in payment of necessary expenses of the trip to this meeting—is sufficient proof of your earnest, self-sacrificing labors in the vineyard of sanitary science, and will, I trust, influence the national legislature to establish on a broad and firm basis a health bureau which shall prove both a blessing and a pride to the whole country.

The pestilence—Asiatic cholera—which has swept off so many thousands of human lives in Europe during the last two years, threatens this country, and, like the awful sword suspended over the head of Damocles, may fall at any moment upon our people and turn the whole nation into mourning. We can scarcely hope to escape next year the presence and terrors of the merciless visitor whose line of march, wherever recorded, has ever been strewn with the dead bodies of its multitude of victims. Are our houses in order for the coming of the unwelcome guest? If not yet, further precious time should not be wasted. In all places the alarm should be repeated, and the command given—"be ye also ready!"

This meeting will be especially memorable because it begins a new series of volumes of the Transactions of the Association. The work done in the past, and recorded in the first series of the handsome volumes, speaks for itself. In none of the great libraries in this country can there be found a system of sanitary literature of greater variety and value than in these volumes. In order that their compass and value may not escape your attention, I have run over them to make and present the following condensed statement of their contents:

Volume I—563 pages—contains 48 papers by 44 authors.

Volume II—552 pages—43 papers by 39 authors.

Volume III—241 pages—29 papers by 29 authors.

Volume IV—396 pages—37 papers by 33 authors.
Volume V—256 pages—20 papers by 19 authors.
Volume VI—497—pages—36 papers by 36 authors.
Volume VII—446 pages—33 papers by 30 authors.
Volume VIII—359 pages—21 papers by 20 authors.
Volume IX—453 pages—26 papers by 26 authors.
Volume X—536 pages—46 papers by 43 authors; or a total of 339 different papers by 222 different authors, not including 12 Presidential addresses and many verbatim reports of interesting discussions of important questions.

Several of the earlier volumes have already become so scarce in the office of the Association that the Treasurer, Dr. Lindsley, has been lately a purchaser of these issues, as opportunity presented, in order to enable him to furnish complete sets. Very soon, the first three volumes cannot be supplied at any price, and the question may now be raised, how shall the break of the set be remedied? The issue of a second edition would be next to impossible, and the only way, I think, to meet the situation would be the publication of a compendium, in one volume, of all the papers contained in the ten volumes. I submit this question for your consideration; and should it receive favor, you will, I am sure, have no difficulty in finding "the right man in the right place" as editor of the proposed volume.

Our energies have been greatly encouraged during the past year by the munificence of Capt. Henry Lomb, a citizen of Rochester, New York, whose large-heartedness of sympathy, and pure love of humanity, induced him to offer at the St. Louis meeting, last year, the sum of $2,800 in prizes to be awarded at this meeting for the best essays on the four subjects selected for competitive study and report. This noble example of Capt. Lomb, it is to be hoped, will, from time to time, be followed by other persons of like liberality, and who believe with him that the cultivation of sanitary science is the way to the highest citizenship and a life of moral purity. The presentation of the Lomb Prize Essays will, therefore, be a special feature of the proceedings of this meeting. How to place them in the hands of the people, and carry out the wish of the generous donor, is a question of great importance and should receive attention, and be disposed of, at this meeting of the Association.

Of not less importance to the Association and the general public will be the report of the Special Committee on Disinfectants; and if the character and value of the complete or final paper may be measured by the preliminary reports which have been made by individual members of that committee, and published in the *Medical News* (Philadelphia), it will prove one of the most valuable contributions ever made to the Transactions of the Association. No such painstaking labor in this field of research was ever before undertaken in this country; and I predict for it not only the attention, but also the thanks of all English-speaking sanitarians. These papers will make the next volume of Transactions a book of unusual interest and value.

And now a few words to my fair hearers who have honored us by their presence, and I am done. The goddess Hygeia—your patron saint—will accept of her admirers and votaries no mere lip-service; nothing less, indeed, than supreme devotion to her charms. The cause of sanitary science presents a strong claim upon your sympathies and affections, because its saving influence brings to the lying-in room, the nursery, the family circle, even down to extreme old age, the beauty of health and the fulfilment of domestic happiness.

The elevation of woman, the just appreciation of female excellence, has ever continued to keep pace with the advance of literature and science. Look at her condition among savage tribes, cultivating the field, or carrying home the bleeding victim of the chase, driven before her barbarian lord. Look at her condition among the semi-barbarians or half-civilized nations, shut up in harems or seraglios, cut off from the enjoyment of society and denied the invigorating influences of pure air and God's own beautiful sunlight. But behold, as science advances, she gradually acquires her true position in the scale of social life, the object of universal regard, the inimitable type of the artist's skill, the theme of the poet's happiest inspiration. I will not ask you, Ladies, to approve, because I know you *will* approve and applaud the labors which are poured as votive offerings at the shrine of your loveliness.

ORIGINAL ARTICLES.

NOTES ON A CASE OF DISEASE OF THE BRAIN.[1]

BY H. J. B. WRIGHT, M.D.,
OF OLNEY, ILL.

In presenting this case to the Association, I have selected only a few of the many changes of symptoms which it presented. I shall purposely omit details, because they do not appear to be necessary to a proper understanding of the structural changes of the case. The treatment did not seem to modify the disease, and therefore I shall not introduce it. The refusal of near relatives to permit an autopsy in the case, which was obscure from first to last, leads me to assert that *grave robbery* is *sometimes* justifiable.

Mr. J. R. M. came to my office in August, 1883, asking advice about a small ulcer which was situated on the anterior surface of the middle third of the left leg. He was not quite sure, but thought it was caused by a slight blow. At first it was a slight node, tender to the touch. A few weeks afterwards the skin broke and ulceration commenced. At the time of his visit to my office he weighed 180 lbs. He asserted that his habits had always been good; he had never had venereal disease. For several years his occupation had been buying and shipping horses. For several years he has had slight rheumatic pains about his shoulders, and in 1875 had a slight facial paralysis, which rapidly passed away. Otherwise his health had always been quite good.

Further examinations showed that the ulcer on his leg would permit a probe to sink to the periosteum, and to be one-half inch in diameter. The

[1] Read before the Mississippi Valley Med. Association, Sept. 9, 1885.

skin about the ulcer was bluish and thickened, and the lower third of the leg was slightly œdematous. His pulse was 85, but very feeble, and the heart's action was in keeping with the radial pulse. His skin was soft and slightly sallow. Tongue rather broad, and covered with a muddy coat. Temperature 98.5° F. He said that his appetite was good, and his bowels active enough, but he felt weak and disposed to sit or lie down. I could find no evidence of syphilis.

Three days after this, on Aug. 31, he was taken with a chill, followed by fever, the temperature only rising to 101° F., but the pulse was 120. He was highly delirious, but would answer questions, and expressed himself as having pain in his head, though he would not locate it. There was no disturbance of the stomach, but the bowels were torpid. The edges of the ulcer were pouting, and the tissues around it engorged. From the ulcer was flowing a thin cream-colored, offensive pus. During the following night the radial pulse grew less frequent and the temperature gradually abated. On the following day he was only slightly delirious; complained of pain in his head and flashes of cold and heat in his back.

During the fortnight following, the prominent symptoms were as follows: Pulse always weak, easily compressed, and ranging in frequency from 70 to 140. During much of the time it was 90. The heart-sounds during much of this period were barely audible, often indistinct. The circulation in the extremities was good, the hands and feet being warm. The skin was never dry and harsh, but was always sallow,— though never markedly jaundiced. His tongue was broad and thick, and coated whitish or cream-colored, but was never dry. The breath was very offensive, often exceedingly so. Stomach quiet; he was indifferent to food, but took nourishment enough. The bowels were torpid, but acted under the influence of mild cathartics. Abdomen soft, never distended by gas. He voided about forty-eight ounces of urine in each twenty-four hours; contained no sugar nor albumen, but was heavily loaded with urates and sometimes with phosphates.

The condition of the nervous system was of very considerable interest. His mind was almost always befogged during the first eight or ten days of this period. During these eight or ten days he slept from twelve to eighteen hours each day, and his mind was much like that of a typhoid fever patient. During the latter part of this period he often talked of driving over the country to look at horses and mules, of eating his meals at certain houses, and of doing just such things as a man engaged in his occupation would do. His sentences were well connected, and he could follow an idea in a straightforward manner. So consistent and natural were his vocal expressions, that a stranger would not have noticed his mental aberration. But his statements were almost always untrue. He would talk about having driven over the prairie to Mr. A. or B.'s house, and having bought a horse of a particular quality; the facts being he had not left his room for several days. He recognized his friends, though he often forgot their names. He was seldom angry, and he never positively refused to follow the directions of his physician, yet he often did so through the obtuseness of his mind. Occasionally he had some difficulty in formulating his ideas, which seemed to be the result of his forgetting words. He had, during this fortnight, persistent frontal headache of moderate severity, which was made worse by the use of quinine and alcoholic stimulants. The brows were often contracted, his face presented a look of weariness, and at times he would stare. During eighteen hours he had double vision, but there was no perceptible deviation of the eyes, and the ophthalmoscope showed nothing within the ball to account for this diplopia. A slight paretic condition of the muscles of the extremities existed, but there was no well-defined paralysis of any muscle. The only indication of spasm which manifested itself was a slight hiccough, which returned at short intervals during two days.

On Sept. 21, we made a crucial incision through the ulcer, and found no disease of the bone, but burrowing pus.

Sept. 25.—My notes read: Slept well last night. He now has ptosis of left lid, with equal contractions of both pupils; no facial paralysis; protrudes tongue slowly, but in a straight line. He cannot express himself so as to be understood, his vocal organs being in a state of paresis. Wound on leg granulating nicely.

Sept. 26.—Is semi-comatose; pupils contracted, skin covered with cold perspiration; heart beats seventy times a minute, respiration eleven a minute, and largely abdominal. Temperature 101° F.

Sept. 27.—Skin warm, heart's action stronger, respirations increased to eighteen and less labored, but it is with difficulty that he can be aroused.

On the following day, the parts supplied by the left seventh nerve were all paralyzed, and the frontal headache continued. He eats anything offered him, but has no choice, the sense of taste being much impaired. Voided urine involuntarily to-day.

Sept. 28.—Wanders about his house, removes the covering from his bed, spits out his medicine, talking less coherently, and enunciates more distinctly. Cutaneous sensibility unimpaired. Sometimes holds his fingers in an awkward position for several minutes.

Sept 30.—Wanders about his neighborhood examining horses and trying to buy them, and this is done contrary to the earnest protest of his attendants. The paralysis is growing less. He protrudes tongue in a straight line.

Oct. 5.—Paralysis all gone, pulse quite good, tongue clean, leg much improved. Went to barber-shop and behaved himself nicely while being shaved. When asked the name of the day of the week he is uncertain. When I laid my finger on his wrist to examine his pulse he said: "I want you to examine me through sea-water up and down," and then spoke several words indistinctly. Five days after this the condition of his mind was improved, but he hiccoughed for several hours.

Oct. 20.—Has some difficulty in swallowing; mind improving.

Nov. 12.—Can express himself very well on any subject with which he is familiar, such as buying and shipping horses as connected with any particular

place, but he is unable to transfer his train of thought correctly from one locality to another. He cannot tell whether he lives in Olney, Ill., or Washington, Ind. It is with great difficulty that he can read small type. There is now a paretic condition of the right side of the face, and upper and lower extremities, and the tendon reflex is more prominent in the right leg.

One month after the above entry, my notes say that his mind is active, but his memory is very poor. For a pain in sacrum I gave him a hypodermatic injection of morphia, which he had entirely forgot ten minutes after. This sacral pain extends around the lower portion of the abdomen, and he has to micturate much too often."

Dec. 27.—Tongue deflects to right. Left corner of mouth slightly drawn up. He talks freely and walks about the neighborhood at his leisure, but the muscles of locomotion are weak.

During the first six months of 1884 his condition was uneventful. On July 30 he slept heavily, and at 9 A. M. was in a stupor so profound that he could not be completely aroused. Early in the day there was marked facial paralysis again, but this passed away against 4 P.M., at which time I saw him. Pulse sixty-four and very feeble, skin cool, face flushed, nothing abnormal about eyes. Protrudes tongue in straight line. His power to enunciate distinctly is only slightly impaired, but he cannot utter a single complete simple sentence. Generally he only speaks the first word and then is unable to recall the other words with which to express himself. It is with great difficulty that he rises from his couch.

Aug. 10—or ten days after the above notes, he came to my office, walking two squares, and I found that his ability to express himself by means of vocal language had returned, and his mind tolerably active. He speaks slowly but distinctly, and repeats what he said a few minutes before, evidently having forgotten. Swings his feet outwards, and strikes his heels against the floor with a thud. He complains of great weakness in his knees, and is inclined to fall backwards.

One month after this the feebleness of his lower extremities had increased so that he could then walk only a few feet, and when the decubitus was dorsal he could not lift his feet off his bed. The facial muscles were not paralyzed, and the pupils were normal. He could read a newspaper about half a minute, when the letters became blurred and his vision completely failed. He rarely expressed a wish, his sensibilities being all obtunded.

Sept. 26, 1884.—He is unable to rise from his bed, and paralysis of his bladder demands the catheter.

Sept. 30.—A little more than one year from the apparent commencement of the disease, he died from failure of the heart. I regret that I was unable to obtain an autopsy.

In reviewing this case, I will call attention to a few points which comprehend the important features of its symptoms and pathology.

1. The family and personal history were good.

2. No evidence of syphilis could be found, and he was the father of several healthy children.

3. He had a painful ulcer on his left leg, which showed no disposition to heal until surgical interference was resorted to.

4. A progressive enfeeblement commenced about the time the ulcer reached an active point in its destructive process.

5. He was then taken with a chill which soon gave way to a temperature of 101° F. After a few hours the temperature returned to normal. During the remainder of his illness his temperature was generally normal, but it was sometimes subnormal and at other times hypernormal.

6. During all his sickness his radial pulse indicated low arterial tension, and the heart's action was very feeble; the sounds being at times inaudible. Though the heart's action was weak, it was not rapid, except when the body-heat was much above normal. The circulation of the blood in the periphery and extremities was generally well maintained. A sudden change from a recumbent to a sitting posture did not increase the action of the heart more than in health. Excepting a few times, the heart's action was regular.

7. The first disturbance of his mind consisted of a busy delirium, which soon gave way to a stupor from which he could not be easily aroused. After a few days his mind regains its wonted activity, but he is unable to limit his mental activity to the real, and deals with the ideal. His accustomed labors are gone over again as he converses with his associates. Memory is seriously impaired, and his respect for truth is apparently entirely lost. One month after his first marked mental disturbance, he is again quite suddenly semi-comatose, and has contracted pupils, very weak pulse, and very slow respiration. From this he gradually emerges again, and reaches a degree of mental soundness which enables him to transact considerable business. By this time he could express himself very well on any subject that he is familiar with, for example buying and shipping horses, as connected with any particular place, but he is unable to transfer his train of thought correctly from one locality to another. Before his death he is twice more semi-comatose, each time regaining only in part his previous condition. Before death his memory was nil.

8th.—The last and, from the pathologist's standpoint, the most interesting features of the case are the oscillations of the motor nervous system. It is true that from the first there was a paresis of the extremities, which deepened, and so far as the lower extremities were concerned, finally became a paralysis, but not so with other voluntary muscles. One morning he awakens with marked paralysis of the levatores palpebrarum, and paresis of one part of the larynx, implying injury to the left motor oculi, and probably one or both of the pneumogastric nerves. Three days after this he has well marked paralysis of the right side of face. On this day we find then that the *left* motor oculi, the right facial and a pneumogastric nerve are implicated. Thirty days after this the muscles supplied by these nerves have regained to a great degree their irritability, and difficult deglutition appears to disappear after a few days. Two months after this first disappearance of the facial paralysis it appears again, to fade away again to a

paretic condition, which is once more deepened by a marked but fleeting paralysis.

Three months after this case came under my care he visited, at my suggestion, a very able physician in Cincinnati, Ohio. The following extracts from his letter indicate his idea of the case, and explain themselves:

Dear Doctor:—Mr. M. has been under my observation since he arrived in this city, until his departure on last evening to pass again under your care. The existence of amnesic-aphasia is plain enough, but only a variety of that disease. It seems to be clear that the Rolandic areas are involved in the left hemisphere, and the posterior aspect of the left third frontal convolution. I am inclined to think that the branches of the left middle cerebral artery have become so affected by the *debris* (?) transported from the ulcerous region of the left tibia as to interfere seriously with the blood-supply to the cerebral regions referred to, and greatly to impair their function, more especially the supply to the third frontal convolution. I think no positive softening has occurred, but rather adventitious deposits in the affected region. Respectfully, ———

About the same date I sent an exact copy of the notes furnished to this physician to an equally prominent neurologist of Chicago, and received the following reply:

Dear Doctor:—I have read the full and, on the whole, satisfactory history of the case you write about. I have no doubt—reasonable doubt—but that you have to deal in your case with a tumor in the left half of the brain; in all probability with consecutive pachy-meningitis, localized inflammation of the brain, regional congestions tending to capillary stasis, etc. Besides tumor, about the only other thing likely to be present is brain abscess. Most respectfully, ———

Similar notes were sent to a very learned physician in Philadelphia. The following is an extract from his reply:

I have no doubt that the case you describe so carefully is one of syphiloma of the brain. No other theory will account for the symptoms. It may and will be said that he has not and could not have had the disease, but this form appears after so many years of apparent cure that no mere denial based on the recent experiences of the individual will suffice.

Very truly yours, ———

TREATMENT OF NEOPLASMS OF THE NASO-PHARYNGEAL CAVITY.[1]

BY J. G. CARPENTER, M.D.,
OF STANFORD, KY.

A consideration of the treatment of neoplasms of the naso-pharyngeal cavity may be appropriately preceded by a report of the following case:

D. S. C., aged 42 years, of good family history, has been afflicted with naso-pharyngeal and aural catarrh since 1879. The subjective symptoms, hawking, tickling in the throat, sensation of a foreign body in the larynx, great inclination to swallow, asthenopia, nasal obstruction, loss of senses of taste, hearing and smell, were well marked. Nausea was present all the time to a slight degree, and culminated in vomiting every morning during the effort to remove the tenaceous muco-pus. There were profound lethargy and dull headache in the frontal region, impairment of the will, intellect and memory, great irritability; involuntarily fell asleep when reading or making a calculation. The expression was dull, indifferent and semi-idiotic. Suspicion was such a prominent symptom that he doubted the sincerity of his best friends.

Objective symptoms were the following: The lining of the naso-pharyngeal cavities was very red, highly congested, infiltrated and tumefied, and had two to five blood-vessels to a circle of a half square inch. The vault and posterior nares were covered with a dirty yellow tenaceous muco-pus; the Eustachian orifices were greatly hyperæmic, infiltrated and constricted. The right half of the vault and posterior naris were occupied by a fibroma, which projected into the right naris, completely obstructing it. The membranæ tympaniorum were semi-opaque, retracted, and the external auditory canals dry and desquamative. Hearing in each ear is $\frac{2}{4\overline{0}}$.

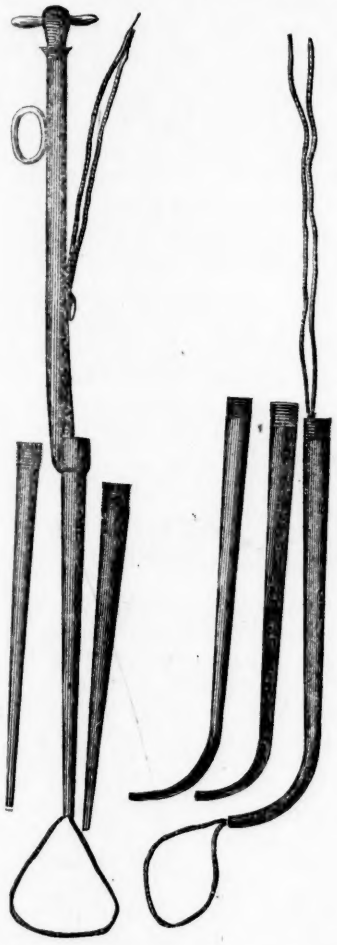
The naso-pharyngeal cavities were cleansed with one teaspoonful each of Listerine, glycerine, and chloride of sodium in a pint of warm water, snuffed from a sponge through the nose, with the head in the three positions advised by Rumbold, and followed every day by local applications of oil of eucalyptus, gtts. vi, vaseline, ℥i, crude carbolic acid, gr. ss, mixed, melted and sprayed with spray producers Nos. 1–5, inclusive, for ten days.

The catarrhal affection having very materially subsided, an effort was made to remove the fibroid *per orem* with Jarvis's curved snare from the posterior naris. The wire was adjusted with some difficulty on account of the growth projecting into the right posterior naris. A tape was passed through the right nostril into the mouth, passed around the wire and back into the nostril and out at the anterior naris. The wire was thus easily applied by pulling it into the posterior naris with the tape, and pushing it up and back with snare. The reflex spasm of the palate was so great that it had to be tied. Every time the tumor was constricted by the wire and considerable traction produced by the screw-power the wire would break. The snare was discarded and an effort made to remove the fibroid with post-nasal forceps, but the attachment was so powerful that it was impossible to do so. Further operative procedures were abandoned, and the naso-pharyngeal cavities sprayed with oil of eucalyptus and vaseline mixture every day for a week, every other day for two weeks, twice a week for three weeks, and once a week for four weeks, the patient using the Listerine mixture every time before receiving the local treatment, to thoroughly cleanse the parts. The fibroid having lost its vitality from the great strangulation of the snare wire and compression of forceps, disintegrated and sloughed without further operative treatment. In addition to the local treatment tonics and restoratives were prescribed freely.

The use of forceps for the removal of growths of the upper air passages is a procedure in which the mucous membrane, the periosteum, and even the bone are often torn away; the pain and hæmorrhage are often quite severe, and the operator, groping his way and feeling for the tumor, often seizes one of the turbinated bones for the polyp. The snare is the most rational, the easiest, most pleasant and least painful of all means for detaching these growths. By

[1] Read before the American Rhinological Association, Oct. 6, 1885.

applying cocaine before using the wire loop, the operation can be performed without pain and irritation to the Schneiderian membrane, and without reflex spasm of the soft palate, or muscles of deglutition; hæmorrhage and destruction of sound tissue are avoided. It takes one or more hours to remove a neoplasm, especially if it be a fibroid, with the snare.



The repeated failure of Jarvis's snare in the writer's hands has caused him to improvise an instrument which has a wide range of application, is much more powerful, and has a different screw-power that works easily with the thumb and index finger. The screw-power is at the distal end of the snare. The instrument is composed of a body and screw, and place for fastening the ends of wire, the wire loop, three straight and three curved tubes of different sizes. The calibres of the tubes are traversed by wires of corresponding sizes; if the smallest wire should break a larger tube and wire may be used. The straight tubes are used for removing tumors through the anterior nares, or even the uterus, vagina or rectum; the curved ones are for application to, and removal of, tumors from the naso-pharyngeal cavity. The writer is convinced that two or more strands of copper wire, twisted, are more powerful and remove the tumor more rapidly than the single steel piano wire of Jarvis's snare. The wire should always be annealed before using it.

Injections of carbolic acid solution, gr. x–xxx to ℥i of water into an anterior nasal polypus or hypertrophied turbinated bones has often produced a complete removal of the former and subsidence of the latter; it takes from five to twenty-five injections once or twice a week to accomplish the desired result, and they are quite painful when made to the turbinated bones. Mucous polypi and sessile growths of the anterior or posterior end of the inferior turbinated bones have yielded to mild astringent applications with the spray, *pari passu* as the catarrhal inflammation subsided.

Polypi have been successfully removed by inserting one index finger into the anterior naris, the other behind the palate into the posterior naris, and thus pinching the pedicle off between the fingers. Dr. M. Rue successfully removed the polypi by passing a cat-gut ligature through the affected nostril into the mouth, then tying a soft dry sponge, the bulk of which, when compressed, would just pass through the narrowest part of the nostril, and then making forcible traction, thus removing any growth in front of the sponge.

On account of the great elasticity of the soft palate, an antero-posterior incision made in the median line, and traction through the opening, has its advocates, for the removal of large neoplasms. After the growth is removed, staphylorrhaphy is performed. Hæmorrhage is the great disadvantage of this operation. The galvano-cautery has proved a very successful means of removing tumors in the upper air passages, as well as in other regions. The pain and hæmorrhage are slight, the wire is carried around the growth and tightened, the connection is made with the battery, and the neoplasm burned off and removed. The disadvantages of the galvano-cautery are troublesome and expensive apparatus, growth often removed by piece-meal, and the process tedious and dreadful to the patient. Dr. Thudicum removed one tumor in fifty-three pieces, and in another case thirty-three introductions were necessary.

Langenbeck's operation is performed by making an incision from the inner angle of eye to the angle of mouth, dissecting the flap, and turning the nose to opposite side, thus increasing the space very materially. Rouges' operation consists in making an incision from angle of the mouth and jaw upwards, and turning the cheek, nose and lip upon the forehead, and is a more extensive operation than Langenbeck's.

Dr. Lincoln, of New York, has had great success in using electrolysis by inserting the electrolytic needle into the neoplasm and producing a great reduction in size before the final operation for removal is done.

Sessile growths of the inferior tubinated bones may be removed by passing the wire loop around the posterior end by introducing the index finger into the posterior nares, and holding the wire on the growth while traction is made; and from the anterior nares by passing the wire over the growth, then transfixing it with a needle, and completing the operation.

Wookes recommends the forceps and plow in addition to the wire loop and needle and galvano-caustic procedures.

Of all the operations for removing foreign growths from the upper air-passages, the ligature and double canula, and tightening the ligature from day to day, has the fewest advocates. It has the disadvantages of too much time consumed, discomfort to patient and horrible stench, and possible erysipelas and septicæmia.

Hæmorrhage is the great complication to be anticipated in removing fibromata. Cartilaginous and osseous growths may be removed by combining one or more of the above methods with such cutting appliances as saws, especially the revolving saw, and dental engine and drill. Resection of the upper jaw and replacing the part excised after the neoplasm is extracted, has its advocates as a *dernier ressort* to give more space for manipulation of tumor.

If a catarrhal inflammation attends the neoplasm, it should be properly treated, and the lining membrane placed in as healthy a state as possible before the operation; after the operation the naso-pharyngeal cavities should be thoroughly cleansed with Listerine, glycerine, and common salt mixture, and sprayed with mild, soothing astringent applications.

A CASE OF PHTHISIS WITH NUMEROUS BACILLI; COMPLETE ARREST OF THE DISEASE.[1]

BY VINCENT Y. BOWDITCH, M.D.,

OF BOSTON, MASS.

Owing to the universal discussions which have been carried on in the medical world during the past year or two over the bacillus tuberculosis, the following case will, I think, be of interest, and if I present it to you rather in detail, I trust I may be pardoned, as it is for the purpose of seeing, if possible, what deductions can be drawn from it as to the significance of bacilli in the sputa of phthisical patients.

On June 20, 1883, I was called to see Miss H., a young lady aged 23, who gave the following history: Always remarkably strong and well, with the exception of a severe "congestion of the lungs of short duration when a baby." All of the bodily functions had been perfectly regular. The father, mother and the whole family were healthy people, without history of lung trouble in any branch. During the previous winter, the patient had interested herself greatly in photography, and had had one or two severe headaches, which increased in number and severity during the few weeks previous to my visit, and four or five weeks before, a slight hacking cough had begun, with greenish sputa. A rapid and marked loss of appetite, flesh and strength, together with feverishness, occasional night sweats, and increasing languor, after a visit to the seashore, so alarmed her mother that she felt a physician must be summoned immediately.

The patient was tall, of fine physique, the face somewhat pale, with a languid expression, the whole appearance being that of one accustomed to robust health, but temporarily indisposed. The voice was slightly hoarse. Upon physical examination, I found very marked dulness at the right apex above and below the clavicle, extending down to about the second intercostal space, and auscultation revealed very numerous loud, moist mucous râles, with prolonged expiratory murmur and decided "nearness of voice" in the region of dulness. Once or twice there was a suspicion of a "squeak" in the left apex. Elsewhere in the chest the physical signs were normal. The temperature was 100.2°, and the pulse 94.

Nourishment was ordered in the form of milk, to be given every two hours with Murdock's Food, and the patient was told to take Fellows' Syrup of the Hypophosphites, to paint over the region of dulness with tincture of iodine for several weeks, and to inhale once or twice a day a mixture of equal parts of tincture of opium, tincture of hyoscyamus and tincture of conium, the inhaler to be placed in a bowl of hot water.

On June 26, a consultation was held with Dr. H. I. Bowditch, and, upon examination, dulness, moist râles and bronchial breathing were noticed above and below the right clavicle, the râles being not quite so numerous as before. Temperature and pulse were normal. The patient was able to eat more, felt stronger and coughed less. The sputa were numulated, greenish, and once or twice during the week had had a reddish tinge.

June 27. Sputa examined by Dr. W. W. Gannett, who reported that *the specimen contained numerous bacilli.*

June 30. Examination showed that the signs were certainly less marked but still distinct in the right apex, and the patient reported "no headache for two weeks." I prescribed, as a residence for the summer, Bethlehem, N. H., having refused to allow the family to go to the seashore, as proposed, and ordered the same medicines to be continued, with instructions that the patient should be in the open air every moment possible during the day, to be back by sunset at the hotel and never to remain outside the house after eight P. M.; to take no long fatiguing excursions, and to eat all the nourishing food possible.

One month later, the mother of the patient wrote that her daughter's health had steadily improved from the first day of their arrival, and that she was beginning to take active exercise without the slightest fatigue. The patient, however, complained of a slight pain in the right side near the axilla. The cough had nearly disappeared; the menses had appeared within a day or two of the normal time, and improvement was so marked that all medication except painting the chest with iodine had been discontinued. I recommended a simple liniment to be rubbed on the chest over the seat of pain, and ordered the hypophosphites to be continued.

Three months later the mother again wrote enthusiastically of her daughter's gain. The patient had gained seven pounds in six weeks, played lawn tennis and took long walks without the slightest fatigue, slept all night like a child, and only had a slight "hemming" through the day. The record of the morning and evening temperature for five days at

[1] Read before the Section for Clinical Medicine, Pathology and Hygiene of the Suffolk District Medical Society, November 11, 1885.

this time showed it to be normal; the pain in the chest had ceased and the patient looked "the picture of health."

In spite of the continued favorable reports, I felt skeptical as to the permanent restoration of health, and felt it to be probably but a temporary gain, to be followed soon by a renewal of the symptoms.

About the middle of September, after a stay of two and a half months in Bethlehem, the family returned to Boston for a few days, en route for Texas, a part of the country I should not have selected as a winter resort, but which for various urgent reasons seemed the best place for the patient, whom I would not allow to remain in Boston for the winter.

Upon examination, the general appearance was of excellent health, the patient being much stouter than in the early summer.

A slight huskiness of the voice was noticeable, however, and an occasional clearing of the throat and slight cough after laughing were enough to strengthen my suspicions that there was still trouble left. No sputa could be obtained at any time for examination. The patient complained of occasional slight "stitches" in the chest, but no localized pain, and felt perfectly well.

Physical examination showed dulness still present in the right apex. Râles of a finer, drier quality, and much fewer in number than before, were heard in this region and the coarser râles had disappeared. The expiratory murmur was marked, with slight broncophony. Respiration in the left apex normal. Pulse 68, temperature 97.8°. During the stay of a few days in Boston, as the patient's appetite failed and the slight cough increased, I hastened her departure as much as possible.

For the next eight months, which were spent in various parts of Texas, I continued to receive enthusiastic accounts of the daughter's health from both parents, with one exception, when, having been subjected late in the winter to very heavy fogs in Galveston, the patient complained of a great sense of oppression in the chest, and of general debility, symptoms which speedily disappeared upon her going to San Antonio, where she remained until the following spring, the early part of the winter having been spent in the interior of the State, where, in spite of great household discomforts and exposure to the blasts of the so-called "Northers," icy winds, which suddenly rush over that region in winter, she remained perfectly well, while other members of her family suffered with severe colds and coughs. A slight clearing of the throat was occasionally noticed, but so slight that her mother remarked that had it not been for the previous summer's experience, a second thought would never have been given it, and was no more than had been present at times ever since childhood, and the patient weighed more than ever in her life before, namely, 155 pounds.

On May 19, 1884, nearly one year after my first examination, the patient returned by sea to New York and thence to Boston, where she arrived with a heavy cold taken in New York during a violent rain storm. Headache, with a return of slight pain occasionally noticed in the upper right chest, were also present, but in a few days all these symptoms disappeared.

Examination showed upon inspection a slight hollow under the right clavicle. Dulness noticed as before. The respiratory murmur was less pure than on the left, but it was almost impossible to get any definite râle, even after cough, but occasionally an indistinct "click" could be heard. Voice rather nearer than on left. Temperature 99°.

The patient remained in Boston until the last of June and then went, at my recommendation, to spend the summer near Lake Champlain and in the Adirondack region, a spot which had seemed to me peculiarly suited for such a case. Here she remained by my advice, in spite of the adverse criticism of many of her friends, who insisted upon her absolute health, until the following spring, and then returned to Boston the picture of robust health, and declaring that, with the exception of an occasional neuralgic headache, she felt absolutely well; that the pains in the chest had disappeared, that long walks and rough climbing caused no shortness of breath, but merely a healthy fatigue, in short, giving a description of as perfect health as one could desire. All medication had been given up several months before.

Examination of the chest showed a return to its normal color, the hollow under the right clavicle having disappeared. The percussion note revealed little difference between the two sides, although at the upper right there was still very slight dulness and a feeling of inelasticity was marked. The respiratory murmur in this region was rather harsh, and after a slight cough under the right clavicle a faint "crackle" was occasionally heard, but the moist coarse râles heard in the examination of two years before had entirely disappeared, while the "nearness of voice" at the upper right was not quite so marked as before.

Considering it wiser for the moral effect upon the patient that she should be told, at the end of my examination, of her recovery, and thus be relieved from the depressing effect of a constant watch upon her symptoms, I bade her, although recognizing in my own mind the possibility of a renewal of the morbid process in the future, to forget that she had ever needed a physician, merely cautioning her against foolishly exposing herself in any way in the future. Up to the present time I have had no reason to think my advice unwise, and in my occasional interviews with the patient during the past few months, I have watched in vain for any symptom, apart from those to be noticed only in a physical examination, which to the medical eye and ear would suggest anything other than a condition of perfect health.

We have, then, the history of a young lady, previously strong and well, seized with sudden and alarming symptoms of acute tubercular disease in the apex of one lung, followed in a few months by a cessation or "drying up," as it were, of the morbid process and consequent shrinking of the lung substance in the affected region, and, so far as outward appearances are concerned, a complete renewal of the patient's health.

What have we to learn from this case?

Two facts of marked importance, it seems to me: *first*, that the rapidity of the fatal result in phthisical

cases is not *always*, as thought by some, in direct ratio to the number of bacilli found in the sputa, (that is, the greater the number of bacilli, the more rapid the course of the disease); and *second*, that the presence of even numerous bacilli in phthisical sputa is not inconsistent with complete arrest of the morbid process and subsequent renewal of the patient's health.

One case like the above, as proof of these assertions, is, of course, of great value to us in making our prognosis, in similar instances when, following the teachings of those whose opinions we respect, we are led to give the gravest prognosis and feel no hope for the recovery of the patient whose sputa reveal the presence of the bacillus tuberculosis.

In an article entitled "The Pathological and Practical Relations of the Doctrine of the Bacillus Tuberculosis," printed in the *Philadelphia Medical News* of January 19, 1884, Prof. Austin Flint writes "So far as my experience goes, an abundance of bacilli in the sputa of phthisical patients is evidence of active progress of the disease and vice versa," and in a conversation with him last spring, he stated that although unable to say absolutely that he had ever so expressed himself in writing, his decided impression was that the presence of bacilli in large quantities in phthisical sputa was a sign of a rapidly fatal termination of the disease, an opinion which, coming from such a source, we are bound to respect, and which make the case in question of still greater importance.

I have used the term "complete arrest of the disease," rather than the word "recovery," in this case to satisfy those who with justice claim that we have no right to use the latter term unless the part affected shall have resumed its normal condition. The use of the former term, however, is justifiable inasmuch as it does not preclude the possibility of a renewal of the trouble at some future time.

MEDICAL PROGRESS.

MATERIA MEDICA AND THERAPEUTICS.

ROASTED COFFEE AS AN ANTISEPTIC.—DR. OPPLER highly recommends roasted coffee as a dressing for wounds, and his results from its use are very satisfactory. The effect is attributed to the presence of vegetable charcoal and to the aromatic empyreumatic compounds formed during the roasting process. Oppler states also that it destroys the odor of iodoform; 20 to 50 per cent. being effectual for this purpose. He gives the following formula for dressings:

Iodoform	50 parts.
Finely powdered roasted coffee	25 "

Triturate with a few drops of ether and dry.

Iodoform	grm.	1.00
Paraffine	"	10.00
Powdered roasted coffee	"	.30

It is also excellent for disguising the taste of castor oil.

Castor oil	2 parts.
Powdered sugar.	
Powdered roasted coffee	aa 1 part.

Nouveaux Remèdes, Oct. 15, 1885.

CHLORIDE OF METHYL IN NEURALGIA.—DR. C. VINAY, in the *Lyon Médical*, July 12, 1885, writes very encouragingly of the benefits of this drug in neuralgia. It was introduced into practice by M. Debove only last August, and is very simple in its mode of application; rendered liquid artificially, it is placed in a syphon bottle and its discharge is regulated by a key valve, which allows it to be thrown out as a jet and vaporize, which action results in a refrigeration of —23° C. (—9.4° F.). This jet, thrown against the skin, results in a rapid congelation; a segment of the skin is instantly transformed into a whitish congealed space, which gives to the finger a sensation of woody resistance. In time, ten seconds is enough for the forearm; in sciatic neuralgias, where the painful surfaces have considerable area, thirty to thirty-five seconds suffice for it to act over the whole of the territory of distribution of the affected nerve, from the nates to the dorsum of the foot. The sensation to the patient is a severe one, and, so say those who have felt both, more painful than the application of fire. In every case the local congelation disappears quickly, the white surface gives place to a very transitory anæmia, with a goose-flesh appearance and general anæsthesia; then appears a diffuse redness which persists for quite a time, and is accompanied with hyperæsthesia. The painful sensation gradually disappears, and in a few hours is replaced by a sensation of heat which is very superficial, as it results from the congestion of cutaneous vessels. When all pain has disappeared there is, in patients affected with sciatica, a certain degree of paresis of the part operated on; that is, a sensation of unaccustomed heaviness, walking no longer produces any painful feelings, but progression is difficult with the affected side. Very often, on the next day or day after, there break out some little phlyctenules of vesication, so that, if a second application be necessary from the persistence of the affection, it is wise to wait until all signs of local phlogosis have disappeared; when there is vesication, say about two days, before renewing it.

Dr. Vinay records twelve cases, viz.: six neuralgias of the sciatic nerve; two neuralgias of the central nerve; one neuralgia of the crural nerve, and three lumbagos. Of these, eleven were cured and one relieved. His cases of sciatica were serious, either from intensity of pain, long continuance of the affection, or trophic disturbances; so that with them he had to make two and three applications before reaching a definite and permanent cure. The objections to its use are: first, the prolonged erythema that ensues; he has seen a case in which it was present four months; but this certainly is not comparable with the indelible pigmentation often left by blisters; secondly, vesication is frequent, but it has no importance in itself; and thirdly, eschars sometimes result, but they are rare and easily avoided. They are superficial and do not seem to be of much importance; they should be avoided, however, as they are a cause for the continuance of the pain in the skin, they interfere with walking, they retard a new application, and prevent patients from going about their usual occupations as soon as they might other-

wise. In the lower limb these little cutaneous sphacelæ select the superficial portion of the popliteal space and where the flexion of the knee is most active. This can be avoided by operating rapidly and superficially.

MEDICINE.

HYDROBROMATE OF QUININE AND VALERIANATE OF CAFFEINE IN MALARIA.—CEREDO, after an extensive experience, concludes that hydrobromate of quinine is preferable to the sulphate for the following reasons:

1. It is more active in moderate doses.
2. It acts as a nervous sedative.
3. It arrests vomiting; a very important matter in some cases.
4. It causes favorable modifications in the type of the fever, and lessens the chances of relapse.
5. It is more pleasant to take, does not irritate the intestinal mucous membrane, and causes neither constipation nor diarrhœa.

If it does not diminish the intensity and duration of the febrile paroxysm, it may be given in capsules with valerianate of caffeine; and this combination, given half an hour before the onset of fever, may arrest it. By thus combining the drugs (hydrobromate of quinine, gr. xv, valerianate of caffeine, gr. viii–x) some of the quotidian forms, which are rebellious to large doses of sulphate of quinine, may be cured. The action of these two salts is much greater than of large doses of quinine alone.—*Nouveaux Remèdes*, Nov. 15, 1885.

INTESTINAL ETHERIZATION IN CHOLERA.—DR. JOSÉ GODOY RICO, of Granada, proposes intestinal etherization in the treatment of Asiatic cholera, on the grounds that the cholera bacillus is killed by ether vapor, and that he believes this bacillus to be the cause of the disease. He thinks it entirely probable that the real cause of the disease is to be found in the ptomaines generated by the bacilli. This does not alter the case, however, since the death of the comma bacilli would at once end the formation of the ptomaines.

For the performance of intestinal etherization a 300 gramme flask is provided, containing 200 grammes of sulphuric ether. The flask is tightly closed with a compact cork, which is perforated so as to include two glass tubes, one slightly curved, through which the ether finds exit, and to the extremity of which is attached a rubber tube, about two feet long, to the end of which is attached a rubber catheter to be introduced into the rectum. The other tube, S-shaped and open at the end, is the tube of security, and contains a small quantity of mercury to show any excess of tension in the intestine, since the column will readily and rapidly change when the tension becomes at all too great.

The patient is placed on his back, with the legs and thighs flexed. The ether flask is placed in a vessel containing water at 93° F., and the catheter of the exit tube is gently introduced into the rectum as deeply as possible. The rubber catheter should be sufficiently rigid that it will not curl up in the rectum. Hot water is then poured into the vessel in which the flask is situated, and the ether vapor is at once disengaged and flows into the intestine. The first contact of the vapor may occasion a sensation of burning pain, soon replaced by that of heat and abdominal tension, or there may be colic and vomiting, which are calmed by compressing the tube; or the operator may have to withdraw it to allow the patient to evacuate the bowel. The disagreeable are soon followed by agreeable sensations, reaching high up in the epigastric region, and followed by eructations which have an etherial odor (which proves that the ileo-cæcal offers no obstacle to the vapor).

To obtain the desired therapeutic effect, the operation should last from ten to fifteen minutes for adults, and five to ten for children. In the first stage of the disease it should be repeated every twelve hours; in the second stage three etherizations, about eight hours apart, will usually suffice; and in the third stage the etherizations should be short, and repeated every hour or half-hour. Morphine may be given hypodermatically to keep the patient as quiet as possible during and after the operation. Of course the usual hygienic and dietetic measures should be strictly carried out. The method is thoroughly endorsed by Dr. Arozarena, lately of Cuba, and now of Granada.—*Crónica Médico-Quirúrgica de la Habana*, November, 1885.

SURGERY.

SPONGE-GRAFTING AND SPONGE-DRESSING.—At a meeting of the Arkhangel Medical Society, DR. P. A. POKROVSKY made an interesting communication on his experience in the use of sponge as a grafting and dressing material. Having reviewed the literature of the subject, the author describes his method of treating wounds and ulcers by means of sponge. He takes a best officinal Turkish sponge (to be found at any chemist's shop), cuts it into fine slices (about two lines in thickness), washes the latter in a 3 per cent. solution of carbolic acid, and, after carefully squeezing them out, covers with them the whole surface of the wound or ulcer; over the slices oil-cloth or wax-paper is applied, the whole being fixed, under but slight pressure, by a roller bandage or a handkerchief. When purulent discharge is excessively free, a layer of cotton-wool or a woolen cloth is placed over the oil-cloth. In other words the author uses sponge instead of gauze, as a constituent of a warming compress. The slices of sponge (as well as the whole dressing) are changed one, two, or three times daily, according to the profuseness of the suppuration. The sponge-dressing, applied in this manner, was employed by the author in four cases of extensive syphilitic ulcers of the thigh, leg, scrotum, and elbow; in eight cases of soft chancrous ulcers of the glans and collum penis, prepuce, scrotum, etc.; in one case of chancrous bubo; and in twelve cases of non-syphilitic ulcers of the leg, forearm, shoulder, etc. In several of the cases sponge-grafting, after Professor Hamilton's plan, was tried. The results of the author's observations may be summed up thus:

1. Sponge used as a dressing material acts on the

ulcerative process purely mechanically. Being porous and endowed with extreme capillarity, it frees the ulcer or wound from purulent discharge; at the same time, it acts as an irritant on the surface of the ulcer. Hence it favors an afflux of nutritive material to the ulcer, which presents a necessary condition for the healing process.

2. Sponge is an excellent dressing material in all cases of old obstinate ulcers with free purulent discharge. Under the sponge-dressing, ulcers pretty rapidly cleanse themselves and undergo cicatrisation. [Thus, in seven cases of crural ulcers cure ensued, on an average, in twenty-six days.]

3. The sponge-dressing brings about rapid cleansing and healing of soft chancres and chancrous buboes (cure following in about ten days).

4. In syphilitic cases, the sponge-dressing gives rise to rapid cicatrisation only after the syphilitic virus has been mitigated by specific treatment; otherwise the application of sponge causes disintegration of tissues.

5. Sponge-grafting causes suppuration and retards the healing process. [The author's attempts at sponge-grafting had been so unsuccessful, that he altogether dismissed Hamilton's method from the treatment of ulcers in his practice. According to his opservations, sponge-grafts do not undergo absorption, but are disintegrated and fall away in pieces during irrigation, or in consequence of their being undermined by pus.] The ulcer does not heal until the last sponge-particle is removed.

In conclusion, Dr. Pokrovsky points to the extreme cheapness of sponge-dressing. All the cases of ulcers which were admitted to the local hospital in 1884 were dressed with sponge; the expense of the latter did not exceed four roubles (about eight shillings).—*London Medical Record*, Nov. 16, 1885.

TREATMENT OF FRACTURE OF THE THIGH IN CHILDREN BY MEANS OF THE "STEADLE-SPLINT."—In a note on this subject, MR. S. WILSON HOPE, of Pentworth, Sussex, says: By the steadle-splint, or crib-splint, is meant the using a steadle, bedstead, or crib, for the purposes of a splint, namely, for extension and counter-extension; and any further appliance for setting, or coaptation, may be omitted, with good results. One method of using it which answers very well is this: from an ordinary bandage, cut such a length as, when folded in the middle, will reach from the lower ribs of the child beyond the top cross-piece, forming part of the framework upon which the mattress rests; whether it be the framework of an iron bedstead, of a crib, or of an old wooden steadle. Take two such lengths, and lay them singly, not doubled, along the sides of the child's chest; and pass round the chest, under the arm-pits, and over the bandage-lengths, an ordinary rib-roller. On bringing upon the outside of the roller the other ends of the bandage-lengths, there is on each side of the chest a loop of bandage, with the rib-roller lying in the loop. Let the upper and the under portion of bandage be secured separately by thread or safety-pins to the upper edge of the rib-roller, and at such points that the under part goes under the shoulder, and the outer part over the shoulder, without dragging. Adjust the child's head and pillow, and fasten the bandage-lengths to the top cross-piece, which forms part of the framework upon which the mattress rests. And one has only to raise the feet of the bedstead upon bricks, when the arrangements for counter-extension are complete. Cover the ankle thickly with wadding, and, having taken a loop-length of bandage, long enough to reach from the angle, beyond the bottom cross-piece, forming part of framework which supports the mattress, tie the bandage round the ankle, with the knot at the back, above the heel; make extension, and secure to the bottom cross-piece. All that remains is to keep the foot in position by means of bandage-lengths passing round the foot, and fastened to the side-pieces of the framework; and the thigh is set. The main use of such a plan as this is that, in whatever out-of-the-way house one finds a child with a broken thigh, there also, is the steadle-splint.

But, besides, the following points might be mentioned in its favor. 1. It avoids all the trouble consequent upon perineal bands in children. 2. The counter-extending bands over the shoulder check both forward and turning over movements during sleep, as well as when awake. 3. In permitting the omission of special setting splints and all bandaging, it adds to the comfort at the time and throughout the treatment.—*British Medical Journal*, Nov. 21, 1885.

NEPHROTOMY FOR TOTAL SUPPRESSION OF URINE.—MR. CLEMENT LUCAS performed an unique operation in Guy's Hospital on October 29th. A woman, from whom he had removed the right kidney for total destruction of its secreting structure by large calculi and hydronephrosis, about four months ago, and who had made a rapid and complete recovery, was suddenly seized with great pain in the left kidney, followed by vomiting, headache, and suppression of urine. She passed urine last on Sunday morning, October 25th, between 8 and 9 o'clock; and from that time till the operation on Thursday afternoon, no urine passed, and vomiting was persistent. Her medical attendant, Mr. Atkins, of Sutton, correctly interpreting the meaning of her symptoms, placed himself in communication with Mr. Lucas, and the patient was brought to London on Wednesday, October 28th. It was thought that the effect of diuretics in flushing the kidney might yet be tried whilst the patient was watched. These proved of no avail, and on Thursday afternoon, the patient having become drowsy and much weaker, Mr. Lucas cut down on the remaining kidney, and removed from the pelvis a conical calculus, measuring seven-eighths of an inch by one-half in its greater diameters. Total suppression had then lasted 102 hours. A free flow of urine took place at once through the wound, and the patient was relieved of her vomiting and drowsiness. Five days after the operation she was doing well and feeling comfortable. Mr. Lucas's case of nephrectomy performed on October 20th healed without suppuration or fever. The patient sat up for the first time on the eighth day, and is now convalescent.—*British Medical Journal*, Nov. 7, 1885.

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PUBLISHED WEEKLY.

THE EDITOR OF THIS JOURNAL would be glad to receive any items of general interest in regard to local events, or matters that it is desirable to call to the attention of the profession. Letters written for publication or containing items of information should be accompanied by the writer's full name and address, although not necessarily to be published. All communications in regard to editorial work should be addressed to the Editor.

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COMPARISONS THAT ARE UNPROFITABLE, AND INFERENCES THAT ARE UNJUST.

In another part of this JOURNAL will be found the interesting address of DR. J. E. REEVES, of Wheeling, West Virginia, as President of the American Public Health Association. While reading it with both pleasure and profit, the following sentence has again reminded us of the paper on "State Medicine" by Dr. Frank S. Billings, published in this JOURNAL, of September 19, 1885. "A comparison," says Dr. Reeves, "of the liberal and wise provision made by some of the European powers for the promotion of sanitary science, and for enforcing its life-saving and wealth-producing precepts among all classes of the people, with the spasmodic, unreliable, and inefficient legislation on the same subject, in this rich and great country of ours, is, to say the least, not flattering to our national pride." From this and what follows relating to the same subject in the address, the legitimate inference would be that our National Government had done little or nothing to foster sanitary science or to promote the health of our citizens; and consequently the latter must be suffering in comparison with the citizens of some European countries whose more liberal and wise governments *enforce* the life-saving precepts of sanitary science among all classes of the people.

The address does not tell us which of the European powers are the most liberal and wise in promoting sanitary science, and enforcing its precepts among the people, or we could turn to the department of vital statistics and learn just how much greater had become the *average* duration of human life in such countries than in our own. But if the reader will refer back to the paper of Dr. Frank S. Billings, he will readily find that the governments which have exhibited the greatest *liberality* and *wisdom* in fostering original investigations, developing sanitary science, and enforcing its precepts in the most efficient and enlightened manner, have been the monarchial governments of France and Germany, while the more liberal or less monarchial governments of Great Britain and the United States have done nothing in this direction. To use his own emphatic language: "There is no such thing as organized State Medicine in Great Britain or in any of her dependencies." Again, "Great Britain has neither a well organized Public Health or Veterinary Police Service." And again, "In the United States, the people of which boast so much about their intelligence and prosperity, there is scarcely any such thing as State Medicine. No efficient Boards of Health; no trustworthy milk inspection; no inspection of dairies, etc., etc. Not a State in this Union gathers reliable statistics on these vital questions. Our Boards of Health are a farce, composed of men the majority of whom have more knowledge of 'ward politics' than of their technical duties." And so on, *ad nauseam.*

It is only just to the members of the Section of State Medicine of the American Medical Association, before whom the paper of Dr. Billings was read, to state that its sentiments were freely criticised by several of the members present, and perhaps not fully endorsed by any. It is not our purpose, however, to criticise at present either the address of Dr. Reeves or the paper of Dr. Billings, but rather to use them as suggestive of three very prevalent and important errors. The first is the habit, on the part of many of the members of our profession, of writing and speaking in terms of indiscriminate disparagement of everything pertaining to the professional and scientific institutions of our own country, as compared with those of Europe. The indulgence of this habit contributes much towards the creation of an unjustly low estimate of all our institutions by the educated classes of other countries, and it strongly discourages efforts at advancement at home. Such writers create the impression in the minds of thousands at home and abroad that there are literally no laboratories, either chemical, histological, physiological or pathological, in any of the medical institutions of this country, in which important practical and original work is or can be done. The truth is, however, that such laboratories have existed for years in the Medical Departments of Harvard, of the Pennsylvania University, of the Michigan University, of the North-

western University, not to mention the Carnegie and Johns Hopkins laboratories recently opened, in which the thorough practical education of students is prosecuted systematically, and some original work of value is being done every year. And much more would have been done, had not the indiscriminate disparagements of our own writers created the impression among a large part of our young men, that they can not be quite sure they can see, even an *os uteri* through a speculum correctly, unless they do it in Vienna or Berlin. If one-half the time and money now spent by young Americans in crowding the laboratories and clinics of Europe, was spent in attendance on the clinics and laboratories already established in our own country, that very patronage would speedily bring to them every appliance and facility for education and original research that is to be found in any part of the world.

The second erroneous impression created by the writers to whom we have been alluding is, that the United States Government has done nothing to foster medical education or to promote sanitary science. To show the erroneousness of such impression it is only necessary to point to the Army Medical Museum and Library; the invaluable volumes containing the Medical and Surgical History of the War, the Naval Bureau of Hygiene, the Medical or Veterinary Department of the Agricultural Bureau, the important original work done in various directions by the National Board of Health and published in its Bulletins, and all supplemented by as efficient a system of quarantine and inspection to prevent the importation of diseases or their causes from other countries, as can be found elsewhere. Has not the money been drawn from the Treasury of the general Government for the creation and progressive development of all these? Has not almost the entire work been done by thoroughly trained medical officers of the Army and Navy, liberally detailed from year to year for such work and sustained by their regular salaries from the Treasury? Then why not be ready and careful to give credit where credit is due, instead of indulging in wholesale disparagements?

The third and last error that we notice as fostered by this class of writers consists in the assumption that everything of value in science, medicine and sanitation must be done by the Government. With them the citizen is the mere ward of the Government, while the latter is an ideal agency possessed of boundless pecuniary resources and such paternal wisdom as fits it to regulate and provide for all the individual and social interests of man. They seem to have no conception of two of the plainest and most important truths of political economy, namely: that human governments have no pecuniary resources except what they draw by some form of taxation from the productive industries of the people they govern; and that whatever, of a sanitary, educational, or scientific character, the citizen in his individual, family, or municipal capacity can do, will be done more efficiently and economically in those capacities than can be done by the paternal interference of the Government. Hence, while neither Great Britain nor the United States have, in the estimation of such writers as Dr. Frank S. Billings, "no such thing as organized State Medicine," and "no efficient Boards of Health," both countries are in better sanitary condition to-day than any of the larger Continental countries; in both is the annual ratio of deaths to the population less; and in both is the average duration of human life greater. Further comment is unnecessary, at present.

STROPHANTHUS, A NEW REMEDY OF THE DIGITALIS GROUP.

In more than one instance civilized man has turned to good account in the healing of the nations deadliest poisons which his savage brother had employed as an agent of destruction. In Central Africa there grows a plant whose seeds are used by the natives as a deadly arrow poison. A paste is made from the crushed seeds and with this the arrow-heads are smeared. It is a powerful muscle-poison, the same as curare. With this agent Dr. Thomas R. Fraser, Professor of Pharmacology and Materia Medica at Edinburgh, has been experimenting for the last fifteen years or more. It is to his paper, delivered before the Section of Pharmacology and Therapeutics at the last annual meeting of the British Medical Association, at Cardiff, that we are indebted for the facts we propose to furnish to our readers.

Dr. Fraser's valuable contribution, together with the discussion upon it, is to be found in the *British Medical Journal* of Nov. 14, 1885. As already stated, the pharmacological and therapeutical properties of strophanthus (hispidus?) have been engaging his attention for fifteen years past, his first contribution on the subject having appeared in the *Proceedings of the Royal Society of Edinburgh*, and the *Journal of Anatomy and Physiology*, 1870. "Previously to this time its chemistry had not been examined, and the only references to its pharmacological action were contained in a brief communication by Pelikan, of St. Petersburgh, to the Academy of Sciences at Paris, 1865." In that same year the drug was mentioned in a note to a paper on heart-poisons, by Drs. Hilton Fagge and Stevenson. In 1872 Polaillon and Car-

ville contributed to the *Archives de Physiologie* the results of their investigations of strophanthus, and confirmed the facts previously announced by Fraser. Its chemical properties were described in 1877 by MM. Hardy and Gallois, in the *Journal de Pharmacie et de Chimie.*

For some time Dr. Fraser was able to obtain but a limited supply of the seeds, and, indeed, for several years was forced to abandon his investigations altogether on this account. He was the first to isolate the active principle which he named strophanthin. This is not an alkaloid, is crystaline white, of a bitter taste, readily soluble in water and rectified spirits, but not in ether and chloroform, and of a slightly acid reaction. It is readily freed from its impurities. Indeed this active principle is so readily separated and exists in such large proportion in the seeds (8–10 per cent.), that so soon as a sufficient quantity of the seeds can be obtained, strophanthin ought to be placed at the disposal of every practitioner. As already stated this agent is a powerful paralysant of all striped muscles.

In order to test its action upon the heart and compare its pharmacological effects with those of digitalis, Dr. Fraser prepared two solutions of the drugs of equal strengths, and by means of Williams' apparatus introduced them into a separated frog's heart. The digitalis used was presumably of fair average strength, having been obtained from a reliable drug-house, yet a solution of 1 part in 4000 failed to paralyze the heart, at least within two hours. On the other hand, solutions of strophanthin of all strengths up to 1 part in 10,000,000 caused a speedy arrest of the heart in systole. Its action was identical in kind with that of digitalis, but inconceivably more energetic. Next a 1 in 20,000 solution of digitalis was made to flow through the vessels of a frog whose central nervous system had been destroyed. In six or seven minutes the vessels became so contracted as to no longer allow the fluid to flow through them. A similar solution of strophanthin, on the contrary, did not produce any appreciable effect upon the arterioles, and even after its strength had been increased to 1 in 2000 the contraction it occasioned was but temporary.

Herein strophanthus presents a striking contrast to foxglove. This difference will probably make it of great therapeutic value, and superior in the treatment of heart disease to any other member of this group of remedial agents. As justly stated by Dr. Fraser, digitalis may not only fail to benefit in some cases of weak hearts, but may actually do harm. It slows and strengthens ventricular contractions, to be sure, but by diminishing the calibre of the vessels, it increases peripheral resistance and thus adds to the heart's labors. Indeed, under such circumstances a heart with degenerated walls may even be subjected to the risk of a rupture. On the contrary, an agent which invigorates the cardiac contractions without materially increasing arterial tension, would seem to represent the purest type of a heart tonic. As a diuretic strophanthus may be inferior to digitalis, since it increases blood pressure only through augmented action of the heart, and not by a heightened arterial tension within the kidney.

Having satisfied himself concerning its physiological action, Dr. Fraser next tried the therapeutic power of this new agent. He employed solutions of the active principle and a tincture of the seeds of the same strength as the tincture of digitalis B. P. Before the Association he narrated the history and displayed the sphygmographic tracings of five cases of mitral disease, in which the remedy had been exhibited in moderate doses two or three times daily. The pulse tracing showed the influence of the agent in forty minutes, and the effects were remarkably persistent. When hypodermic injections of one-fiftieth of a grain were given the beneficial action was manifested in twenty minutes. In one case, the pulse fell in one hour and forty minutes from 140 to 86 beats in the minute. The effects did not wholly disappear until the eighth day subsequently. Digitalin, tried in the same manner and of the same strength, yielded less satisfactory results. Prompt and free diuresis always followed the exhibition of strophanthin. There was noticed a slight lowering of the temperature in some cases. The remedy was administered cautiously, it is true, but bad consequences or disadvantages of any kind were not noted.

Space forbids so explicit an account of these cases as their interest would dictate, and the reader is referred for particulars to the original. On the whole, the report of strophanthin is most encouraging, and it bids fair to prove a powerful rival to the representative of this group of heart tonics. We trust that our enterprising chemists will, before long, supply the profession with reliable preparations of it in abundance. All honor to Dr. Fraser for his painstaking and scientifically accurate investigations.

ORAL AND DENTAL SECTION OF THE NINTH INTERNATIONAL MEDICAL CONGRESS.

So far as we have observed, the journals in different parts of the country devoted to the interests of oral and dental science and practice, give expressions of cordial approval of the present preliminary organ-

ization of the Congress, and especially of the organization of the Section of Oral and Dental Surgery. The only exception we have noticed is that of the *Independent Practitioner*, published at Buffalo, whose editor, in the December number, has the following singular statement: "Following this (the meeting of the Committee on Organization, in Chicago, in June last) came the announcement that the Section of Dental and Oral Surgery was, by the reorganized Committee, abolished, and that dentists would not be welcomed to the Congress, upon the ground that such medical men as had devoted their lives to the consideration of diseases of the oral cavity were not engaged in the legitimate practice of any branch of the healing art."

It is a sufficient answer to all this, to simply state the fact that no such announcement was ever authorized by the "reorganized Committee," nor by any other party representing the American Medical Association. On the contrary, the latter body had fully recognized the relations of dental and oral surgery to the general field of medicine and surgery several years since by organizing and maintaining a Section in that department on the same level with all its other Sections. The simple facts are that the Committee of Arrangements at its first meeting in June found nineteen Sections organized, which it was then thought was a greater number than could be accommodated with convenient rooms in Washington, and more than had been provided for at any of the preceding Congresses. Solely for the purpose of reducing the number, propositions were made and temporarily adopted to discontinue the Sections of Mental and Nervous Diseases, of Gynecology, and of Dental and Oral Surgery, leaving the workers in those departments to take their places in the Sections of General Medicine, Obstetrics, and General Surgery, respectively. We say temporarily adopted, because neither the revision of the Rules nor of the Sections was completed and finally adopted by the Committee until its second meeting, in September, when, after more full consideration, all the three Sections, the discontinuance of which had been proposed, were retained without a dissenting vote in the Committee; that of Dental and Oral Surgery without the change of a single officer. And there is every indication that the Section will be sustained with a degree of enthusiasm that will not only do credit to the many scientific workers in that department, but will also aid much in restoring that department to its proper place, as a legitimate branch of the healing art, much to the benefit of both specialists and general practitioners; and it is to be hoped that this Section will be made so eminently successful that no Congress hereafter will be considered complete without it; for we agree fully with the renowned Virchow, that no one department can be isolated altogether without detriment to the whole.

A CHICAGO POLYCLINIC.

Initiatory steps have been taken to establish a regular Polyclinic in this city, similar in character to the institutions under the same name in New York, Philadelphia, and some of the foreign cities. If such institutions are profitable both for those engaged in them and for the profession at large, there is no reason why one of the first class should not exist in Chicago. The number and extent of her public hospitals and dispensaries open for clinical instruction, the number and ability of those practising and teaching in special departments, and the number of medical students annually attending her medical colleges, give her rank among the most prominent medical centres in this country.

Indeed, there is nothing to prevent any practitioner of more than three years' standing from matriculating in one or more of the regular schools, and by taking the tickets for admission to the principal hospitals and the special tickets for the chemical, histological and pathological laboratories, and then selecting for himself, not only clinical instruction in any variety and to any extent that his time will permit him to attend, but also, in the several laboratories, any amount of practical work either in chemistry or microscopy that he may desire, thereby making up for himself a polyclinic of such extent and duration as he might choose. Any thoughtful practitioner can thus select for himself such extent of post graduate studies, in connection with the colleges, hospitals and laboratories of Chicago, or any of the other prominent medical centres of our country, as will be of more practical value to him, than he can get by the expenditure of the same amount of time and money in Vienna, Paris or Berlin. He may not acquire as much self-conceit, but he will gain a better knowledge of the advantages afforded by the institutions of his own country.

THE MÜTTER LECTURES.—The Mütter Lectures for the present year, at the College of Physicians of Philadelphia, will be given by DR. HENRY F. FORMAD, commencing on Tuesday evening, December 8, and continuing each Tuesday and Friday evening to January 19, 1886. The subjects discussed in the Lectures will be, "Morbid States as influenced by Embryonal Development, Anomalous Structural Peculiarities, Injuries, and the effects of Lower Organisms, with special reference to *Surgical Pathology*."

SOCIETY PROCEEDINGS.

MASSACHUSETTS MEDICAL SOCIETY—SUFFOLK DISTRICT.

SECTION FOR CLINICAL MEDICINE, PATHOLOGY AND HYGIENE.

ALBERT N. BLODGETT, SECRETARY.

Meeting of November 11, 1885.

FREDERICK I. KNIGHT, M.D., IN THE CHAIR.

DR. S. C. MARTIN, of Roxbury, read a paper on

THE INOCULATION, PROPAGATION, AND PRESERVATION OF THE VIRUS OF ANIMAL VACCINE. WITH A DESCRIPTION OF THE APPEARANCES OF KINE POX, AND DEMONSTRATION OF THE VACCINE VESICLE UPON HEIFERS.

Before entering upon the more practical part of his remarks, he said: It is important to define just what true animal vaccination is. I know of no better definition than that by my father: "The inoculation of a young selected animal of the bovine species from an original spontaneous case of cow-pox, from this, others and so on, in continous and endless series, as the source and the only source of virus for the protection of the human race against variolus disease." This alone is true animal vaccination. Retro-vaccination, or the inoculation of animals with humanized virus, is an entirely different matter and has nothing to recommend it.

A few words in regard to some of the various stocks of cow-pox. On March 28, 1866, the famous case at Beaugençy, France, was discovered. From virus derived from inoculation from this, Professor Depaul continued the propagation of animal virus at Paris, under the auspices of the Academy of Medicine. This was the stock introduced into this country by my father in 1870. Various other cases of spontaneous cow-pox have been discovered from time to time in Europe, with virus from which animal vaccination has been and is still carried on in a number of establishments, notably at Brussels, Amsterdam, Rotterdam and the Hague. After the first experimental inoculation of two calves, animal vaccination was not carried on at Beaugençy, but was immediately transferred to Paris, and to that city the practice of the method in France was confined. A knowledge of this fact may, perhaps, in the future prevent a repetition of the ludicrous mistakes which we occasionally see in print, that various individuals have from time to time imported animal virus into this country from Beaugençy. When in Paris in 1873, my father was assured by Professor Depaul that the Beaugençy virus, sent to him in 1870, was the last which left the city before the siege in that year, and that during the seige, the "stock" was lost. The animal virus employed since the Franco-Prussian war, is from other stocks, discovered since that of Beaugençy.

In February, 1881, a case of suspected cow-pox was reported to this society by Dr. E. W. Cushing, and was immediately referred to my father, who accompanied Dr. Cushing to his brother's farm at Cohasset. He there found several cows suffering from an eruption on their teats and udders. With virus from these, my father and myself inoculated several animals as well as children, obtaining undoubted typical vaccinal effect. This stock I have continued uninterruptedly since, and, as far as I know, it is the only authentic case of cow-pox in this country which has been preserved. I keep up three different stocks continuously, namely, the Beaugençy, Cohasset, and the Esneaux stock imported from Dr. Warlomont, of Brussels; reserving the upper flank of the animal for the Cohasset, the lower flank for the Belgian, and the belly for the Beaugençy, thus keeping the three stocks entirely distinct, and issuing the virus from all indifferently. They appear to be all equally typical in appearance and results.

It goes without saying that the animal to be vaccinated should be in perfect health and condition. This must be preserved by proper sanitary measures not necessary to detail here. The animals should be from six to eighteen months old. Too young animals are troublesome to care for and manage, and those too old and large are not only difficult to control, but, notably in the case of those which have borne calves, are probably not free from danger of tuberculosis. I use bulls and heifers indifferently. The animal is secured upon the operating table, portions of the flanks and belly are cleanly shaved, and scarifications are then made in precisely the same manner as in the human subject, not deep, but merely sufficient to produce a slight appearance of serum tinged with blood. These I make some three-quarters of an inch by half an inch in size, and place them at intervals of at least an inch and a half apart. The fluid virus taken directly from an animal, in which the disease has matured and lying upon an adjoining table, is then thoroughly rubbed into these scarifications. The disease matures at about the seventh day. In this, however, experience and careful inspection of the vesicles is necessary to determine the precise time, it depending somewhat on the condition of the animal and climatic influences. During the progress of the disease, the animal is but little affected, the temperature rarely rising more than two or three degrees. Occasionally in a very fine development of the disease, the animal may lose its appetite for a day or two.

The vesicle on being opened, is wiped clean of any blood or pus, and gentle pressure is then applied. The fluid contained in the vesicle is of a light amber color, and should have an unctuous, smooth character. In animals where the disease is accompanied by excessive action, as shown by much tumefaction of the surrounding tissues, a large amount of thin, almost colorless fluid is poured out, due to an admixture of excessive flow of serum with the virus itself. I shall speak of this matter more at length in a moment. In some calves, from the finest vesicles it is impossible to obtain lymph without a certain tinge of color, due to the admixture of a minute quantity of blood. This, it can be readily seen, is not of the slightest importance in virus taken from the animal. It was always my father's custom, and is my own, to use those points most tinged, not only for vaccinating other animals, but also for human vacci-

nation. The sharp end of the ivory points is charged on both sides with the fluid virus as it exudes from the vesicle. When dried, the points are wrapped in cotton in packages of convenient size, then in paper, and finally are hermetically sealed in gutta-percha tissue. This effectually guards against moisture, and if care be taken to keep them cool as well, they will retain their efficacy for a considerable time. I have myself made vaccinations with points so kept for over a year, and have obtained perfectly good and typical results. This, however, is not recommended. Points should be ordered only in small quantities as required, and used within a few days or weeks. In this, and also in all the details of propagation, it is not what may perhaps suffice, but what experience has shown is safe and good beyond peradventure.

As to the form of virus, I recommend nothing but fluid lymph dried upon ivory points, prepared as above described. Crusts are likely to prove inert, and, unless used with the greatest care, may cause very bad results from partial decomposition ensuing after the crust has been moistened. They are apt also to encourage highly undesirable methods, such as inserting the dry, pulverized crust, or portions of the crust itself into punctures; also mixing with water, and allowing the mixture to remain too long exposed to the air. This was one very serious objection to the "solid lymph cones," formerly sold in large quantities, but now, it is believed, no longer in the market. These were composed of crusts and fragments of crusts, powdered, moistened and molded into cone-shaped masses. They were not only open to all the objections applying to crusts, but the mode of their manufacture rendered them peculiarly liable to dangers evident to any intelligent physician. Storing fluid lymph in glass capillary tubes has been found very unsatisfactory. It was at one time much in vogue, but experience has shown that virus so stored is extremely likely to prove inert, and unless sealed perfectly tight may become decomposed and dangerous. One great merit of points is, that it is well-nigh impossible to have serious complications attending their use, if they are charged with pure active lymph in the first instance. They either produce typical vaccinia, or, at the worst, prove inert owing to some accidental cause subsequent to charging. In distributing any form of virus, we must bear in mind that among so large a body of men as compose the medical profession, some will be found who will not use proper care on all occaslons, and it is most important to issue only that form with which it is impossible to go wrong.

The propagation of animal virus, and its distribution to physicians, are at present, in several ways, in an unsatisfactory state. The *New York Medical Record*, in its issue of October 24th, 1885, editorially says: "At present in all large centres, bovine virus in vaccinating is largely used, and the steadily increasing demand for this has led to the formation of companies who undertake to cultivate and sell it, with a view primarily, to making money. These companies are not, as a rule, under any official supervision, and are at perfect liberty to disseminate worthless crusts or septic poison among the people. We learn as an illustration that, with a lot of bovine virus recently sent to Montreal, there were one hundred and two trials and one hundred and two failures, while other specimens have produced badly inflamed arms. Here, surely, is a most anomalous condition of things. It is apparent at once that this cultivating and selling of virus should always be under some official supervision. Most States indirectly compel the vaccination of children, and they should in all justice see that this vaccination be made with pure and efficient material. But the public supervision of vaccine companies is not yet carried out as it should be, although it is a measure most imperatively needed for the security of the people."

The distribution of virus to physicians is now largely done through druggists and instrument makers. My father and I have for several years refused to supply virus except directly to physicians, or through the hands of local agents in Boston for the convenience of the profession. We continued this rule until it became evident that physicians would not take the trouble to procure it direct, but preferred to rely on the nearest druggist. This is all wrong. Vaccine virus is not a substance to pass through three or four intermediate hands before reaching the physician. It is peculiarly liable to deterioration, and, furthermore, the physician should know just who propagates the virus he uses. I fear that in many cases he is entirely in the dark as to this. Many propagators do not do business under their own names. Large numbers of "Companies" are advertising widely. Possibly, some of these are regularly incorporated companies and are conducted by competent men; but it is believed that some of them adopt the title merely as a convenient *nom de guerre*, like those of certain "Institutes" composed of a "Board of Physicians," in whose spacious laboratories skilled chemists and *savans* compound precious elixirs for the relief of noble but erring youths. I wish to emphasize this matter somewhat for the reason that physicians have become far to careless as too the source of their vaccine supply. The druggist naturally will sell the virus on which he can make the most profit. Animal virus, properly and honestly propagated, is not cheap. By improper methods it can be produced in immense quantities. The temptation to do this, particularly in times of great demand, is irresistible to men who have no professional reputation to sustain, and who look upon the matter as a "business or trade."

I have described and shown what I consider the proper method of inoculating the animal and preparing the virus. My father and myself after many experiments, found it to be the best. The number of points which an animal vaccinated in this manner will yield is comparatively small; but I consider that any attempt to increase the yield is fraught with certain dangers. In times of great demand (the time above all when only what is *known* to be the best should be practiced) certain propagators have found this method far too old-fashioned and "unbusiness-like" for their views. An animal must be made to yield 15,000 to 20,000 points, or more. To accomplish this the following expedient has been adopted.

A full-grown cow is usually selected on account of its size. Scarifications from two and one-half to three inches in length, by some two to three inches in width are made on the flanks at intervals of about an inch apart. These produce large inflamed surfaces, often coalescing, so that at the end of seven days, one large sore will often occupy the whole escutcheon of the animal. Upon this being opened, an immense flow of *colorless* fluid results, with which points are charged. I state the method to you, and say frankly that I utterly disapprove of it. Such extensive scarifications with the great attendant inflammation, must necessarily produce an excessive flow of serum, and it would be a bold man indeed, who would confidently pronounce the resulting fluid free from the products of inflammation. It will readily be seen that such immense sores will yield an almost unlimited supply of this fluid. It seems to me that the practice is fraught with dangers, evident to any intelligent physician. Suppose the only possible trouble to be apprehended from such virus was either failure to produce typical vaccinia, or the production of vaccinia, *plus* a certain amount of inflammatory action, greater or less.

Surely, there being a better way, it should be practiced in preference, even if not so profitable and even if it did not allow the propagator to be so "liberal" to agents and boards of health.

The wholesale propagation and distribution of improperly prepared virus have done infinite harm to the reputation of animal vaccination. My father introduced the method as an improvement on the existing state of things. It *is* an improvement, and a great reform, if properly and honestly carried on; but many reports, a few of which I read to you, tend to show that from certain causes it is capable of becoming the very reverse of a reform.

The Board of Health of Louisiana writes, May 16, 1882: "Failure with bovine points during the present season has been the rule rather than the exception." The Secretary of the State Board of Health of Arkansas writes, April 28, 1882: "The trouble in this State has been not so much from the bad effects derived from bovine virus, but rather, from obtaining no effects at all. Reports have reached me from all parts of the State in regard to the worthless character of much of the bovine virus employed." The Secretary of the Medical Association of Alabama writes, April 30, 1882: "To sum up the whole in brief, the profession here to a man prefer humanized virus to the bovine lymph in any form, and have long since abandoned it." The State Board of Health of Minnesota writes, April 28, 1882: "There has been much complaint in all directions."

Dr. E. L. Griffin, of Fond du Lac, Mich., an intelligent and able propagator of virus, writes, February 8, 1882: "I fully sympathize with your views on what is being done during the boom to supply the demand, and greatly fear that animal vaccination will get a bad set back from the experience of this season." The same gentleman writes, March 6, 1882: "Those infernal 'cones' have done much mischief, I believe, in the West. The other day I got a sharp letter from the Secretary of the Board of Health of a neighboring city, upbraiding me on the quality of my virus, saying that it did not give typical developments of pock, but produced enormous sloughs and sore arms, etc., and wished to know what I was going to do about it. Upon inquiry by correspondence, I found that they had been using cones, obtained from a druggist in Chicago, and that the stuff was represented as coming from me."

Dr. D. A. McLean, of Stanton, Mich., writes, May 8, 1882, in regard to his experience with points from the notable vaccine company before referred to, whose virus was propagated by farmers. This virus he obtained through a druggist, supposing it to be that propagated by the gentleman who exposed the fraud, as narrated before. Dr. McLean writes:— "The remaining 1400 cases were vaccinated with points obtained from that institution. A large proportion of these cases were very severe, the fever high and very frequently confining them to the house for a week or more. The local manifestations were great swelling, redness, pain, in fact all the symptoms of vaccinia greatly intensified, and frequently resulting in a deep, foul, and very offensive ulcer. These were very slow to heal; in fact, at this date, nearly three months after the vaccination, I am told that some are not healed. In a large number of cases, I am satisfied that no true vaccine pustule was formed, merely a septic sore, and these were the worst cases to heal, and the constitutional disturbances were the greatest. From my experience I am led to believe that the virus was not pure, that is, proper care had not been used in propagating and preparing it; that pus from ordinary suppurating sores had been used to charge the points, or at least had become mixed with the vaccine virus."

Dr. Benj. McCluer, of Dubuque, Iowa, writes, July 7, 1882: "I used one 'cone' during my vaccinations last December and January. I became fearful of them, as also of the points. The vaccinations were so severe in development, such immense ulcerations occurred in apparently healthy children, that I became doubtful in regard to the propriety of vaccination at all. In fact, I lost all confidence in the integrity of the parties dealing in vaccine matter, and felt that they were actually trifling with the health and lives of the community, as well as the character and honor of the profession which was procuring the supply of vaccine matter from them. I do hope that some way may be developed by which in the future the profession may be able to secure pure vaccine."

Dr. John B. Weston, of Chester, Pa., writes, October 6, 1882: "Part of the time I used a cone which came in a metal box with a file. Part of the time I used a crust. My experience with the cone was vexatious in the extreme. Erysipelas was not infrequent, and I am afraid that the fever and disturbance in one case, if not in two, caused a child's death. The sores in most cases were horrible, and many told me that they would rather have variola itself than what they had gone through. It was not due to any carelessness on my part, for I did not use any a second time, or mix one day's filings with another, so I know the fault was not mine."

Dr. T. S. Hopkins, of Thomasville, Ga., writes to the *National Board of Health Bulletin* of March 4, 1882, describing the effects of vaccination with virus in the form of "cones:" "The result has been fearful. Nearly every one vaccinated has suffered severely from erythema, or erysipelas, the arm swollen from shoulder to wrist, and the point of puncture presenting the appearance of a sloughing ulcer discharging freely sanious pus. Many of the cases have been confined to bed with high fever from five to ten days, requiring the constant application of poultices, and the free use of morphia for the relief of pain. It (the virus) 'takes' in all cases, regardless of previous vaccination as shown by well-pitted mark, and the inflammation begins frequently on the second day. Those who have tried it tell me they would much prefer to have small-pox."

I have reports of many more similar groups of cases, but will not prolong my quotations to a tedious length. The above are merely selected as being well-marked instances, showing clearly the symptoms of septic poisoning in a greater or less degree. It will be observed that the above are groups of cases, showing precisely similar symptoms in a large proportion of the persons vaccinated. Single isolated cases of even severe complications, the result of accident, or in unsound or sickly subjects, prove nothing; but such instances as given above are unmistakable. The vaccinia induced by heifer-transmitted virus is characterized by a certain intensity of action which might be startling to one accustomed to seeing only the effects of the enfeebled virus of long humanization; but this intensity is not to be deplored, and is only what is necessary for proper protection against variola. It should run a regular course, the vesicle should not break down except through exposure to violence, and, finally, the crust should fall, leaving a healthy, thoroughly healed cicatrix.

The complications spoken of above, as well as the woful lack of success, are not due to the *practice*, but to the *malpractice* of animal vaccination. With animal virus properly and honestly propagated, the chances of failure or serious complications are exceedingly small. Practically the only guarantee which the physician has that the substance on the end of an ivory point is pure virus, or, indeed, that it is vaccine virus at all, is the reputation, skill and honesty of the propagator. So long as physicians and boards of health will buy and recommend virus simply because it is cheap and produces a "sore arm," utterly regardless of the source of supply, or whether the propagator is a physician or not, so long may we expect a reckless increase in production, the keenest and most dishonest competition, and such results as I have shown above. Animal vaccination is too efficient a safeguard against a loathsome disease, to have its good name injured by ignorance or knavery. The remedy is in the hands of physicians. They should inform themselves of the source of supply of the virus they use, and if abuses arise, should denounce them fearlessly, and not leave the disagreeable task to persons whose pecuniary interest in the matter renders their motives liable to misconstruction and willful misrepresentation.

The discussion was opened by DR. S. W. ABBOTT, Chairman of the Massachusetts State Board of Health, who stated that he had been interested in the subject of vaccination as a protection from small-pox for many years. During the late Civil War, the source of the virus obtained for the army was from retro-vaccination from the human species to the bovine, and from this source many thousands of soldiers acquired immunity from small-pox. Dr. Abbott entirely agreed with Dr. Martin in the necessity of the greatest care to preserve the purity of the bovine virus, and in the importance to the medical profession and to the entire people that the business of propagating vaccine virus should be intrusted only to such persons as are well known, responsible, and honest; besides possessing the necessary medical knowledge required for the safe and scrupulous management of so delicate a pathological process as is that of the vaccine disease in cattle.

The virus of vaccine is subject to many dangers even when most carefully produced and most thoroughly protected. From the moment the lymph leaves the parent vesicle in which it was formed, it is undergoing a process of deterioration. Under some conditions, the best virus may become quite useless as a protection against the ravages of small-pox. I have known this to be the case in many parts of the United States, and to some persons, it has been the cause of a loss of confidence in the utility of vaccination as a prophylactic measure. Dr. Griffin, who is one of the pioneers of vaccination in the West, has observed the same failure in regard to the protective power in the virus, which he traces to the following causes: *First*, the great distance from the source of the virus, which necessarily exposes this delicate material to many undesirable changes of temperature, and to a longer period of time between its production and the time of its use for protective inoculation. All virus is exceedingly perishable, and is constantly suffering from the moment it leaves the heifer. There is no doubt that ivory points are much to be preferred for the preservation of the virus, as they are smooth, shapely and convenient, and are beyond question the most useful carrier ever employed.

The use of crusts resulting from vaccine vesicles, or any portion of the dried scab, should be utterly abolished, and these substances should be entirely discarded in the protective and prophylactic treatment of variolous diseases. Many accidents have occurred from their use for purposes of vaccination, and not a few unfortunate complications, such as erysipelas, abscess, sloughing of the skin of the arm, and occasionally, septicæmia and death, have followed the introduction of the scab, or crust, or the so-called "cones," or parts of these substances into the human system. Of all these materials for inoculation, the "cones," which were formerly more extensively employed than now, are undoubtedly the most dangerous, as they were manufactured from scabs, crusts, and other products of the vaccine process, together with the frequent admixture of manure and other forms of filth and decomposition.

The proper time for preserving the virus for inoc-

ulation is at a period before the crust is formed. After this time, the contents of the vesicle become purulent, and the resulting scab or crust is formed in part at least, of the dried and changed pus of the later stages of the vaccine sore. When a scab is used, the pus is introduced into the system. The results of infection of the system with the products of septic suppuration are too well known and of too grave a character to warrant the employment of a method involving the needless exposure of human beings to the unnecessary perils of so grave and unscientific a procedure under the guise of hygienic protection from a loathsome infective disorder.

The use of capillary glass tubes containing lymph is also to be discouraged, as the fluid contents are very easily decomposed and may be already in a putrid condition when employed for vaccination. The tubes may also contain many foreign germs, which certainly contaminate the virus and may entirely pervert its usefulness. The contents of the tubes is also often diluted with glycerine or some other fluid, sometimes, no doubt, as a means of preserving the virus, but frequently, also, it is to be feared for purposes of fraud in "extending" the virus. Dr. Abbott spoke of the incongruity of terms designating variola in the cow as a "spontaneous" disease. When we ask ourself, "what is a 'spontaneous' disease." it seems hardly logical to include among such diseases one so highly infectious, so thoroughly marked and so definitely limited as is cow-pox. Is it, indeed, possible that an infectious disease can arise spontaneously?

Dr. Abbott stated that he has seen no less than twenty cases of cow-pox among the cattle belonging to farmers in Massachusetts. The nature of the disease was tested by inoculation of children, in whom it produced sore arms. True vaccination will not "take" on animals which have had this disease during at least two years. Those milking such diseased cows will frequently acquire the disease upon the hand, from contact with the cow's udder. One cow has often proved a source of infection for others of the same herd, by transmission of virus from one to another by means of the hands of the milkers. This has been successfully prevented by the simple precaution of milking the diseased animal after the others. Such cases among domestic cattle have been observed in Lexington, Woburn, Saugus, and some other towns, and were considered both by the farmers and the State Board of Health to be undoubted cases of cow-pox. The production of animal virus is accompanied by much sacrifice of time and money, and much disappointment and vexation, owing to the spasmodic character of the demand for it as a protection against variola. During the times of epidemic small-pox, the demand for virus is very large, while in time of absence of the disease, the demand for virus is almost nil. It is therefore highly important that the production of vaccine virus should be in the hands of trustworthy and responsible men, in order to insure the integrity of its propagation in time of peace, as well as the integrity of quality in periods of epidemic small-pox.

The medical profession of the United States should recognize the laudable efforts of Dr. Martin to maintain and propagate pure and efficient virus, and support him in his beneficent work as they supported his father before him. Vaccination can be made thorough and protective only by observing accurate methods in its employment. One of the chief disappointments in vaccination is due to the advanced age and consequent deterioration of the virus employed. A complaint was recently made by a physician in a distant part of the State, that the vaccine obtained for use in that town was quite worthless; and produced no appreciable result in any case. Investigation revealed the fact that the physician derived his vaccine from the local druggist, who had obtained a supply some time before from a wholesale drug store in Boston. In this case the virus had passed through several hands before it reached the physician, and much time had elapsed between the charging of the points from the heifer and the vaccination for protection from variola. It would be desirable if all packages were dated so the physician might be sure that the virus was of a recent production. Otherwise the whole process of inoculation as a protection from small-pox might be justly described in the words of a distinguished French physician who said, "Vaccination is a deceptive operation performed with hypothetical virus." It may be added, that if due attention were given to the source from which the virus is obtained, and proper care is exercised in the operation of vaccination, there would probably be much less or none at all of the excited sentiment and frequently also open opposition to preventive inoculation for small-pox; and anti-vaccination riots would be no longer known.

Dr. J. H. McCollom, City Physician of Boston, stated that he entirely agreed with Dr. Abbott in the importance of employing only the virus procured from well known and honorable sources, as we otherwise have no guarantee of its power as a protective, or of its freedom from foreign and dangerous contamination. Dr. McCollom has used virus procured from Dr. Martin as well as that coming from other sources. He has occasionally seen the virus produce very sore arms but has never observed bad results. He now unqualifiedly recommends bovine virus. Human virus was formerly very generally employed, and this too without any bad results, but the protective power of humanized virus is infinitely less than that of bovine virus. One of the greatest curiosities in vaccination is the influence of the vaccine disease upon true variola. This was recently illustrated in the case of a man who was exposed to small-pox and two days later was vaccinated with cow-pox. The eruption of variola appeared, as did also the vesicle from the vaccination. The two diseases progressed, but the vesicles of small-pox *never became pustular*. The entire disease was checked at the vesicular stage. The importance of vaccination after exposure to small-pox is therefore even greater if possible than before exposure to that disease. The virus obtained from the inoculation of young heifers is preferable to that from cows, owing to the liability of the latter to tuberculous disease. In the light of recent studies in tuberculosis it is important to avoid the possibility of infecting the human body with germs of this disease.

DR. S. L. ABBOTT asked if it were the experience of the present season that the inoculation with bovine virus is followed by unusually severe results. In many cases there is much constitutional disturbance. Is it possible that the existence of small-pox at this time provokes an unusual reaction in the system after vaccination?

DR. MARTIN replied that true animal virus is characterized by a certain intensity of action more than is observed from humanized virus. Instead of a mild vesicle at the seventh day, we observe a well-marked disease which may last from twenty-one to thirty-two days. The areola appears at the ninth to tenth day and the fever also appears at that time. A crust is formed after the fall of the scab from the original vesicle. The process affects the entire thickness of the skin and not simply the epidermis. The intensity of the reaction is a valuable indication of the protective power of the virus. Indeed the earlier observers of this process judged the success of the inoculation from the degree of fever produced. The bovine virus induces a distinct *disease* which protects the animal system from an invasion by small-pox, which humanized virus does not. The arms of servants and laborers are more sore on account of their occupation which necessitates exposure of the limbs to various insults, as well as to sudden change of temperature, both of which doubtless cause increased severity in the vaccine disease. The term "spontaneous" cow-pox is certainly a misnomer. It is used simply as a convenient expression in cases where the source of infection of the cow cannot be traced. "Spontaneous" infective disease is doubtless derived from some tangible source, but it is impossible to discover its origin. If Dr. Abbott has seen so large a number of cases of genuine cow-pox, he has certainly been far luckier than Dr. Martin. There may be isolated cases, but they are certainly not generally known. The only indisputable case now recognized as occurring in this country is the Cohasset case, which has since been propagated by Dr. Martin in uninterrupted succession. There are many known cases of spurious disease which make the hands of the milkers sore. Such cases have long been observed, and were reported by so old an authority as Sir William Jenner himself, but this disease is not cow-pox, nor has it any similarity to the true disease in the way of protection against small-pox.

MEDICAL SOCIETY OF THE DISTRICT OF COLUMBIA.

Stated Meeting, November 11, 1885.

WM. G. PALMER, M.D., TEMPORARY CHAIRMAN, IN THE CHAIR.

DR. BERMANN presented a patient with

A CYSTIC GOITRE.

and read the following history of her case:

Miss ——, aged 23 years, consulted me about a throat affection which had been troubling her for several years. She spoke in an unnatural falsetto tone, and was subject to frequently recurring attacks of aphonia. Laryngoscopic examination revealed complete paralysis of the right vocal cord; a condition evidently due to the existence of a cystic enlargement of the thyroid gland, which was principally developed upon the corresponding side of the neck. I treated her for some time with the customary remedies, giving iodide of potassium in large doses, combined with iron, as she was chlorotic. External application of tincture of iodine was employed, as well as faradization of the larynx.

This line of treatment having failed, I resolved to try a method recently recommended by Dr. A. Weiss, of Meiningen (*Berl. klin. Woch.*, No. 2, January 12, 1885). This consists of cauterization of the integument covering the goitre. After three applications of the galvano-cautery, I observed a decided diminution in the size of the goitre, as well as softening of the contents of the cyst. I have no doubt but that after a few more applications the goitre will entirely disappear. Her voice is improving very much, and there is every reason to believe it will be fully restored after the cause of the trouble will have been removed.

In reply to a question from Dr. Hagner, Dr. Bermann said he did not believe there was any hysterical element in the case.

DR. J. FORD THOMPSON read a note on

THE HYPODERMIC USE OF COCAINE.

He said that his early experience with cocaine had not given satisfactory results. The reason for this, however, was not to be found in the drug, but in the mode of using it. He believed that it cannot be relied upon when merely applied externally to mucous surfaces, skin, or other tissues. It seems to have its greatest power when applied to the eye and the respiratory tract. In other localities it has often failed him. He had used it on the male and female urethra prior to an operation, and there was no anæsthetic effect. He had sought to use it before closing an enlarged meatus urinarius, but the man suffered as much as if water alone had been applied. He endeavored to dilate the urethra of a young lady in order to search the bladder. Before doing so he painted the urethra, in fact, filled it, with a solution of cocaine, but without avail. He was compelled to give ether. He then began to use cocaine hypodermatically (four per cent. solution), and was well pleased with his results. When it failed, he believed it was his fault in not waiting long enough for the action of the drug. He had used it successfully in operating upon internal and external hemorrhoids, in opening abscesses, in operations upon the upper jaw, in circumcisions, in removing splinters and toenails, in lancing a bone felon, in removing a tumor from the neck, and a fatty tumor from the scalp, in restoring the perineum, in aspirating an abdominal tumor in a child, in external urethrotomy, and in many other cases.

On November 9, however, he unsuccessfully injected it before using the actual cautery. He attributed the failure, though, to his not waiting long enough for the action of the drug. A few moments later, the patient complained of numbness in the

part, showing, as the doctor thought, that the action of the cocaine was obtained, and if he had waited the patient would not have suffered from the application of the cautery. He had used all the other local anæsthetics, such as rhigoline, ether-spray, ice and salt, but he considered cocaine better than all others. He thought it fortunate that we were in the possession of such a valuable local anæsthetic, as he believed there were many cases in which the causation of general anæsthesia was of doubtful propriety. He had seen two cases in the past few months where the death of the patient was at least indirectly hastened by the administration of ether, or at any rate the anæsthetic added to the already existing dangerous condition.

In reply to a question by Dr. King, he said he had noticed a soporific influence of the cocaine upon one patient, and Dr. McArdle had told him of an infant's having been twice put to sleep by dropping it into the eye.

Dr. King thought it would be a good idea to place a ring upon the surface to be cut or punctured, and pour the cocaine into the space thus circumscribed. An incision then being made, the cocaine would be absorbed, and the incision could be continued until the required depth was reached. In using it hypodermatically he thought the exposed part might escape the anæsthetic effect. Moreover, this method might be tried if the doctor had forgotten his hypodermic syringe.

FOREIGN CORRESPONDENCE.

LETTER FROM LONDON.

(FROM OUR OWN CORRESPONDENT.)

Value of Vaccination—A New Ventilator—Pasteur's Work in Hydrophobia—Tauro-cholate of Soda in Gouty Obesity and Dyspepsia—Presentation of the Albert Medal to Dr. C. Thompson—Death of Dr. Pirie.

Dr. Gayton, Medical Superintendent of the North-Western Hospital, and formerly Superintendent of the Homerton Small-pox Hospital, the Hospital Ships "Atlas" and "Endymion," and the Darenth Small-pox Camp, has probably had a wider experience in small-pox than any living authority. His opinion, therefore, upon the value of vaccination is of the highest importance, and the analysis which he has just published, of 10,403 cases of small-pox which have come under his observation, is the largest collection of cases that can be referred to, with the exception of those prepared by the late Dr. Mareon, of the Highgate Small-pox Hospital. In the first place, it lays down that a person who has been properly vaccinated, and re-vaccinated, is absolutely safe. Of males vaccinated once, and having good marks of vaccination still visible, there were 1163; the mortality among these was 3.26. Of 922 females similarly marked, the mortality was 2.60 per cent.; the combined mortality in males and females being 2.97 per cent. Of the male cases in which the marks of vaccination were imperfect—2670 in number—10.11 per cent. died; in 2184 females similarly marked, the death-rate was 8.46 per cent., the average of males and females together being 9.37 per cent. Of 692 males who stated that they had been vaccinated, but whose arms showed no evidence of the fact, the rate of mortality was 29.4 per cent., and among 603 females similarly circumstanced, 24.5 per cent. died, the combined mortality being 27.18 per cent. Among patients showing perfect marks of vaccination the mortality was but 2.97 per cent. Among those whose marks were imperfect the mortality rose to 9.37 per cent., the patients whose marks had entirely disappeared suffering to the extent of 27.18 per cent., while of the unvaccinated no less than 43.70 per cent. died. More convincing proofs than this of the value and efficacy of vaccination were never published, and one recommends the consideration of the figures to the people who clamor to be allowed to expose their children without this protection to the scourge of small-pox.

Under the name of the "Gloucester Domestic Ventilator," Mr. Ellis, a surgeon of Gloucester, has recently patented a contrivance for the ventilation of rooms, which seems likely to be of great utility. It differs only in details from the form of ventilator with horizontal inlet and vertical distributing tube, which was re-introduced to public notice a few years ago by Mr. Tobin. The details in question are, however, of considerable practical importance. At the junction of the horizontal and vertical portions there is a door, so arranged that it can close the inlet either entirely or partially, thus giving to the occupants of a room complete control over the quantity of air which is admitted. Besides performing this office, the door is made to slide up into the vertical tube, and when thus pushed out of the way, it gives free access to the horizontal portion. The outer opening of this is guarded by a strainer of cheese-cloth, or similar material, which excludes dirt, and which can be changed as often as necessary; while on the nearer side of the strainer there is a chamber which can be made to contain perfumes or disinfectants. As in the so-called Tobin system, the entrance of air is determined by the difference in atmospheric pressure within and without the room, so that the amount admitted will be greater in winter than in summer, and the fire-place furnishes a sufficient outlet. The ventilator is made by Matthews, of Gloucester, and is of such a size that two bricks must be removed in order to place it in position.

The world will owe a lasting debt of gratitude to M. Pasteur if he has really discovered how to cure that most horrible of maladies, hydrophobia. He believes he has proved it to be curable, and, in support of his assertion he has communicated to the French Academy of Sciences the results of his experiments and researches relating to rabies in the human subject. M. Pasteur had, in the course of the summer, an opportunity of testing the value of his method on a boy, who had been recently bitten by a dog unquestionably proved to have been mad at the time of the accident. The boy had been brought from Alsace by his parents to be placed under the eminent Professor's care. He was examined by M. Pasteur and two distinguished medical men;

fourteen bites were found about his body, and the symptoms of the dreaded disease were already evident in the patient. In the space of ten days the child was inoculated no fewer than thirteen times on the same system as M. Pasteur has successfully tried with dogs. This was three months ago, and until now nothing has occurred in the condition of the patient to shake the operator's faith in his method. The boy continues in excellent health, and M. Pasteur believes that he is not only safe from hydrophobia caused by the bites of the dog, but also from any bad effects resulting from the animal virus introduced into his system to ensure his safety from rabies.

One of the active principles of ox-gall has found its way into pharmacy under the auspices of Dr. Mortimer Granville, who asserts that he has derived benefit from its use in cases of gouty obesity and dyspepsia. The material is tauro-cholate of soda, which is prepared by exhausting dried ox-gall with alcohol, and precipitating the tauro-cholate by means of ether. By evaporation of the ether it slowly separates as a thick treacle-like body, which adheres to the sides of the vessel. The remaining ether is decanted and the residue dried at a low temperature. It is formed into pills, three grains in one pill. The taste of tauro-cholate of soda is first sweet and then bitter; it produces in the throat the peculiar sensation of heart-burn. It is recommended that the pills be coated with keratine, to prevent them dissolving in the stomach.

An interesting ceremony was lately performed at the Castle Dublin, in the presentation of an Albert Medal to Dr. C. Thompson, of Tyrone Infirmary, in recognition of the heroism shown by him in the practice of his professlon, in removing matter which had collected after tracheotomy in a case of diphtheria by sucking it away. Colonel Caulfield, of the 4th Royal Enniskillen Fusiliers, having introduced Dr. Thompson, the Lord Lieutenant, addressing the doctor, spoke highly of his skill and courage. The latter quality, his Lordship observed, had many forms, and the highest form of it was that in which moral qualities mingled with the physical. His Lordship added: "It is my most satisfactory duty to-day, in the name of my Sovereign, to mark you out as one of those who has signally distinguished himself in this respect."

Aberdeen students at home and abroad will hear with regret of the death of Dr. D. R. Pirie, Principal and Vice-Chancellor of the Northern Alma Mater. Paralysis was the cause of death. The principal was 82 years of age. G. O. M.

DOMESTIC CORRESPONDENCE

"PNEUMATIC DIFFERENTIATION."

TO THE EDITOR OF THE JOURNAL:

Dear Sir:—Having read almost all the articles recently published in this country, on the subject of "Pneumatic Differentiation," as applied to the treatment of thoracic diseases, and having, long since, had some experience with the same *principle* as a therapeutic measure, elsewhere applied to the body, I would offer a few words, which at this juncture may prove salutary—a few lines which may not only be a good thing for the laity (indirectly), but for the profession, directly, as the means of a cash-saving, and as a stimulus of thought, in more than one direction. It is not my purpose, however, in this article, to controvert any of the positions (though doubting some), assumed by the friends of the "pneumatic cabinet," either as to its efficiency or the *modus operandi* by which its results are achieved. On the contrary, it is, in right hands, a good thing. My purpose is two-fold:—to ask of what this new (?) process consists? and how can the "competent" practitioner most readily and economically provide himself and patrons with the same, and at the same time attain or maintain that standard of professional honor, dignity and self-respect portrayed by Dr. Inglis in his recent address, published in a late number of this JOURNAL?

Let Dr. W. F. Williams, in the *Medical Record*, of Jan. 17, 1885, answer our first point. "Pneumatic Differentiation," he says, "consists in immersing a patient in a partial vacuum, by removing to a sufficient degree the external pressure of the atmosphere, and at the same time supplying the lungs with air at its normal pressure, and to a greater or less extent impregnated with the substance which it is desired to administer." Very good; that is, analyzed, as set forth in practice, the air in the cabinet is rarefied around the patient sufficiently to, at least, reverse the act of respiration—so that inspiration shall be passive, and respiration active, circumstances governing the degree; and on this very *reversal of normal respiration* hinges the efficacy of the treatment. This is the true key to "differentiation." Granted; then, of course, a medicated spray thrown into the denser air will be transported by it towards the less resisting, and elastic lung. It will penetrate that lung easier, and to a greater depth, than it would do were the two atmospheres not "differentiated."

We, in the country, are very fond of mechanics (necessity being the mother of invention), and certainly the *corpus hominis* affords, at least to physicians, ample suggestions of levers, of triangles, arches, circles, parallelograms of force, of the mechanics of hydrostatics and even of pneumatics; and, most certainly, in the use of the "pneumatic differentiation" process, we are enabled to attain not only the highest state of respiratory gymnastics, but also to most thoroughly apply locally our medicaments. And, living "in this neck of woods," it is very fortunate that Dame Nature has somewhat endowed us with "a mechanical turn;" thereby enabling us to answer, incontrovertibly, the second purpose of our communication, viz.:—to place it in the power of all to provide themselves with the effective means of "pneumatic differentiation" economically, and without the necessity for, directly or indirectly, partaking of forbidden fruit, and enabling us to live (professionally) as Cæsar would wish his wife to live.

Our apparatus (to which all are welcome) may be easily consructed for less than $100. Proceed thus:

Make of walnut or other suitable wood an air-tight

box or case, 2×8×6 feet. Stand on one end. Fit a plate glass in the front, and back of it hang a good syphon barometer—that any one can make. In the back, opposite to the glass, be sure to construct a door (which you may enter to "correct" your barometer. Ornament to suit taste. Now, hang a second barometer outside of the case. On a stand, placed conveniently, set a tin reservoir that will hold from six to eight gallons of compressed air, which is to be used to atomize your medicated solutions. Next, pass a tube of one inch in diameter through one side of the cabinet, and provide the external end with a flexible tube and mouthpiece, while near the cabinet place a stop-cock. Between the flexible tube and the cock, expand the tube and insert a rubber cork of sufficient size to accommodate the nozzle of the atomizer. Last, place a good air-pump on the projecting floor of the cabinet, on the same side as the inhaling tube, and provide it with two tubes and so arrange the valves that they may compress the air in the cabinet or in the reservoir, when the pump is operated. These pipes are provided with cocks, so that they may act singly or together.

So much for the apparatus. Now, let us proceed to perform "*pneumatic differentiation*," and thus:

Prepare your inhalant and attach your atomizer to the reservoir, and place its nozzle in the rubber cork. Compare the barometers. Operate the pump till the air in the cabinet is sufficiently condensed, *i. e.*, till the inside barometer shows a rise in the mercury of from eight-tenths of an inch to two inches (one inch has not often been used). See that the air in the reservoir is well condensed. Seat your patient in the cozy room, outside the coffin-like box, at the inhaling piece. Now, Dr. Williams's conditions are accomplished, *i. e.*, the patient is "immersed in a partial vacuum"—that is, in an atmosphere rarer than that which he is to respire—rarer by the amount of condensation you have judged expedient to cause in the cabinet. Now, open the cock, let the patient inhale, and the most beautiful mechanical effects—"calisthenic action," corpuscular gyrations and physio-chemico-vital gymnastics, so graphically described by Drs. Williams, Bowditch, Houghton, Smith and Tiegel, will take place.

Your cabinet may be perforated with a hole, surrounded by elastic rubber, through which a paralyzed or atrophied limb may be passed, the rubber serving to bind the member and to exclude the air. Now, reverse the action of the pump, greatly rarefying or exhausting the air in the cabinet. Here, in well-selected cases, we will find marked improvement, due to "pneumatic differentiation," by its resultant—a better nutrition. Judiciously applied, this apparatus will not disappoint you. Its cost is far less than that of any device that will do its work equally well, and, paid for once, it will last a lifetime—and, further, in its use no one's rights or interests are violated, and the profession will in no wise become *particeps criminis*, "accessory after the fact," which expression, if somewhat dark, might be elucidated by another, of different profession. And I may close this note with the very last words—words embodying the same sentiments and feelings that thrilled the breast of Dr. Inglis when he uttered them, after having deplored the conduct of the profession in its running after false gods, and pointing them to the resurrection of therapeutics and therapeutists—"Let us all begin now."

Scholium.—A professional brother, just in from Goose Creek (facetiously, I fear), suggests that the cabinet might be made of some other form, and in varied size, adapted to children. I doubt the propriety. Very truly yours,

W. H. KANE KING, M.D.

Mt. Sterling, Ill., December 4, 1885.

DEATH-RATE OF PNEUMONIA.

TO THE EDITOR OF THE JOURNAL:

Dear Sir.—Recently the question of the death-rate of pneumonic fever has come up in your JOURNAL. The statements of Dr. Hart (JOURNAL, Oct. 10) regarding the *former frightful* and *now insignificant* mortality attending this disease are but the echo of the words of many other writers everywhere. I have met them over and over again, and have always recognized their harmful nature, and consider your editorial in THE JOURNAL of October 31st timely and to the point.

I have collected statistics of 170,692 cases of pneumonic fever, and of these 29,653 died; a mortality of 17.3 per cent. Excluding the 42,467 cases from the German army, with a death-rate of only 3 per cent.—regarding the worth of which I have doubts—and we have 128,225 cases, of which 28,129 were fatal; a death rate of 21.9 per cent. This I regard as being not far from the true proportion. But the important point shown in my tables is the fact that *the mortality varies but little in different lands, or under different plans of treatment, or at various periods of time during the present century.*

Pneumonic fever is, and always has been, the most fatal acute disease with which mankind has had to contend, and we are forced to acknowledge, with regret, that but little has yet been done to diminish its fatality. *It is not now, and never will be, the trifling ailment which it is sometimes represented to be.*

I am, very respectfully,

EDWARD F. WELLS, M.D.

Minster, Ohio, Nov. 21, 1885.

EARLY GONORRHŒA.

TO THE EDITOR OF THE JOURNAL:

Dear Sir.—Dr. E. B. Ward, of Greensboro, Ala., while reporting two cases of gonorrhœa in negro boys, aged 7 and 9 years, respectively, writes: "I would like to ask if any of your readers can report so young a case of gonorrhœa?"

Within a month a lad of *five years* was brought to my office with the following history and symptoms: A neighbor, with whose children the little fellow sometimes played, observed that when attempting to urinate he seemed to be in great agony. She examined him, and at once reported her discovery and suspicions to the child's mother, a widow, of doubtful reputation. The response was, "I know it, but have no money to pay to the doctors."

The Samaritan woman then brought the boy to

me. In confirmation of my diagnosis of a specific disease, the lad, with downcast eyes, confessed to toying with a dissolute sister of about twice his own age. Very truly yours, C. M. FENN, M.D.

San Diego, Cal., Nov. 10, 1885.

REFLEX CONJUNCTIVITIS.

TO THE EDITOR OF THE JOURNAL:

Dear Sir.—In THE JOURNAL of Nov. 14, p. 538, is an article by Dr. N. R. Gordon on "Chronic Conjunctivitis Dependent upon Diseases of the Intra-Nasal Tissues," in which he remarks that no authors have made mention of this fact; and he refers particularly to *reflex conjunctivitis* in association with hypertrophic rhinitis. While conjunctivitis by propagation or extension from an inflammation of the nasal tissues is common and familiar to all oculists, the reflected form is *rare*, but in my address in New Orleans (see THE JOURNAL, Vol. iv, p. 705, 1885) I mentioned my observation of *reflex conjunctivitis* as a reflex neurosis of the nose. Prior to that time I had never seen it mentioned by any one else. Since that time I have seen other cases.

Very truly, JOS. A. WHITE, M.D.

Richmond, Va., Nov. 17, 1885.

MISCELLANEOUS.

INFORMATION OF IMPORTANCE TO ALL MEMBERS OF THE AMERICAN MEDICAL ASSOCIATION.

MEMBERSHIP.—Every one who attends an annual meeting of the Association as a delegate pays at that time five dollars, and thenceforward becomes a Permanent Member. He continues as such as long as he remains in good standing in the body from which he was originally sent as a delegate. As a Permanent Member, he must pay *Five Dollars Annually*, when notified by the Treasurer, whether he attends the meetings of the Association or not. Payment of annual dues entitles him to receive the weekly JOURNAL of the Association for one year.

MEMBERS BY APPLICATION are such as have not become Permanent Members in the manner above indicated, but apply to the Trea urer for membership, forwarding at the same time to him five dollars and the certificate of the President and Secretary of their State or local society, that they are in good standing in such society. They pay five dollars annually thereafter, when notified by the Treasurer. Members by application can join the Association at any time, and they receive regularly the weekly JOURNAL.

WHEN DUES ARE PAYABLE.—The annual dues from Permanent Members are payable to the Treasurer at the time of the annual meeting of the Association, or immediately thereafter. The payment entitles the member to receive the JOURNAL for one year from the following July. Payment for 1885, for example, entitles the member to the JOURNAL from July, 1885, to June, 1886, inclusive.

As some of the members have not yet forwarded to the Treasurer their dues for 1885, they are urgently requested to do so at an early day. Having entered upon another year of membership, they are morally and legally responsible to the Association for the payment of their annual dues, having already received for three months of the new year—1885—the JOURNAL of the Association.

SUBSCRIPTIONS TO THE JOURNAL, from those who are not members of the Association, should be forwarded to the office of publication, 65 Randolph Street, Chicago, and not to the Treasurer; but *all payments of annual dues must be forwarded to the Treasurer, Lock Box 1274, Philadelphia.*

DEATHS.—When a member of the Association, who is in regular receipt of the JOURNAL, dies, his family or other representatives are requested to inform the Treasurer at once of the fact.

PAYMENT OF DUES FOR PREVIOUS YEARS.—As a few members of the Association are still in arrears for payment of dues for 1883 and 1884, they are requested to forward at once to the Treasurer the amounts for which they are indebted to the Association.

TRANSACTIONS OF THE ASSOCIATION.—These annual volumes, thirty-three in number, to 1882 inclusive, may still be obtained, with few exceptions, from the Treasurer, at reduced prices. The Index to these volumes will be forwarded on receipt of *One Dollar*. An opportunity is thus afforded to complete sets of these valuable publications, or to obtain important papers and works which are daily becoming scarce.

RICHARD J. DUNGLISON, M.D., *Treasurer.*
Lock Box 1274, Philadelphia, Pa.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, U. S. ARMY, FROM NOVEMBER 28, 1885, TO DECEMBER 4, 1885.

Maj. R. S. Vickery, Surgeon U. S. A., relieved from the assignment as Acting Medical Director Dept. Col., to date the 16th inst. (S. O. 200, Dept. Col., Nov. 23, 1885.)

Capt. C. K. Winne, Asst. Surgeon, assigned to duty as post surgeon, Benicia Barracks, and attending surgeon at Benicia Arsenal, Col. (S. O. 109, Dept. Col., Nov. 20, 1885.)

OFFICIAL LIST OF CHANGES IN THE MEDICAL CORPS OF THE U. S. NAVY, DURING THE WEEK ENDING DECEMBER 5, 1885.

Hampton Aulick, Surgeon, ordered to "Alliance" as relief of Surgeon G. P. Bradley.

Geo. P. Bradley, Surgeon, ordered to Naval Hospital, Philadelphia.

Joseph Shafer, Asst. Surgeon, detached from Naval Hospital, Philadelphia, and ordered to "Minnesota."

J. H. Gaines, P. A. Surgeon, detached from Naval Hospital, Washington, and ordered to the "Dolphin."

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF MEDICAL OFFICERS OF THE U. S. MARINE HOSPITAL SERVICE FOR THE TWO WEEKS ENDED DECEMBER 5, 1885.

Wyman, Walter, Surgeon, granted leave to attend meeting of American Public Health Association. Dec. 3, 1885.

Benson J, A., Passed Asst. Surgeon, granted leave of absence for fifteen days. Nov. 28, 1885.

Armstrong, S. T., Passed Asst. Surgeon, granted leave of absence for eight days, Nov. 30, 1885.

Wasdin, Eugene, Asst. Surgeon, granted leave of absence for thirty days. Nov. 28, 1885.

Watkins, R. B., Asst. Surgeon, to proceed to Galveston, Texas, for temporary duty. Nov. 30, 1885.